

LEARNING ENGLISH AS A SECOND LANGUAGE IN A
COOPERATIVE LEARNING ENVIRONMENT: DOES PERSONALITY TYPE
MATTER?

By

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Abstract

To examine the effects of cooperative learning and the personality trait of extraversion on ESOL students studying English at an urban, Mid-Western, secondary school, a mixed methods study was designed. The quantitative section of the study used a 5-week quasi-experimental pretest-posttest comparison group research design. Seventy-five students studying in three sections of high-intermediate and two sections of advanced level students participated in the study. Three class sections received instruction through cooperative learning and the other two class sections received whole-class instruction on seven English parts-speech. Students in sections that received instruction through cooperative learning also were surveyed about their levels of extraversion. Results from the pretest and posttest comparisons were then matched with the students' levels of extraversion to investigate if they were correlated. For the qualitative section of the study, prior to the treatment, eight students were selected based on their levels of extraversion. The participants were interviewed one week prior to the treatment and again one week after the treatment had concluded to gain their insights into the effects of learning English in cooperative groups and whole-class grouping. Three specific research questions guided the study. The first looked at difference in students' grammar proficiency development in classes employing cooperative learning activities versus whole-class instructional activities, the second compared student achievement between the cooperative learning groups and whole-class instruction groups in relation to levels of extraversion, and the third focused on a selected sample of students learning

experiences in cooperative learning instruction and in whole-class instruction. Data were collected via learners' pretest and posttest scores on the dependent variables. Descriptive statistics were calculated for all variables, comprising means, standard deviations, medians, minimum and maximum values for continuous variables, and frequencies and percentages were calculated for categorical demographic variables. No significant differences were found between the treatment and control groups pretest and posttest scores. Likewise, a correlation between levels of extraversion and achievement scores was not found. Overall, the findings of the quantitative section of the study did not find a consistent pattern in favor of cooperative learning over whole-class learning, nor a pattern in favor of extraversion over introversion while working in cooperative groups. The main concept that emerged from the qualitative section of the study was that the more introverted participants preferred whole-class instruction, while the more extraverted participants preferred cooperative learning. The study gives practical recommendations for the use of cooperative learning in high school ESOL classes.

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Chapter 1: Introduction

The importance of learning English in the United States differs from person to person. For students who have immigrated to the United States and speak a different language at home, learning English is of paramount importance, especially as they attempt to have a successful learning experience. The number of students who find themselves in this situation is quite substantial. The National Center for Educational Statistics estimates in the 2013-2014 school year that there were 4.4 million English Language Learners (ELLs) attending public schools in the United States (English Language Learners, 2016, May). In spite of their own efforts and enthusiasm and the support of teachers, administrators, policy makers, and researchers, many of them will not be successful in learning English or graduating from secondary school. The high school graduation rate in 2014 for ELLs was just 62.6 percent as compared to a national average for all students of 80 percent (Mitchell, 2016). To help students develop English proficiency, many school districts have created English for Speakers of Other Languages (ESOL) classes in which students work on developing their language skills, which can then be applied in their other classes.

ESOL teachers have explored many different models of teaching in order to maximize student learning. One method that has been well received by learners and teachers alike is cooperative learning (Dörnyei, 1997; Gwyn-Paquette, & Tochon, 2003; Szostek, 1994). Cooperative learning is defined as “the instructional use of small groups so that students work together to maximize their own and each other’s learning” (Johnson, Johnson, & Holubec, 1998. p.5). Cooperative learning typically involves a small group of 3-5 students working together to solve a problem, complete a task, or accomplish a common goal (Slavin, 1987). Traditionally, most classroom environments have been set up for either individual learning or competitive

learning where students compete with one another for grades and attention (Johnson & Johnson, 2002, Kagan, 2009). In a class in which cooperative learning is implemented, the students are encouraged to build positive interdependence in which they rely on one another to accomplish their learning goals and every student is to be seen as a learning resource (Gillies & Boyd, 2009; Johnson & Johnson, 1998; Kagan 2009; Slavin 2011). In addition to building their content knowledge while working cooperatively, students also have an opportunity to build interpersonal communication skills (Gillies, 2006; Gillies & Boyd, 2009; Johnson & Johnson, 1989; Kagan 2009; Mercer, 1996). Another positive attribute of cooperative learning is that it has been found that students generally like working with their classmates in small groups (Dörnyei, 1997; Gwyn- Paquette, & Tochon, 2003; Szostek, 1994). This idea was supported by the pilot study for this dissertation in which the high school ELLs who were surveyed stated that they enjoyed working in cooperative groups and consider them to be “fun.”

Cooperative learning is rooted in social constructivism, social interdependence, cognitive development, and behavioral learning (Morgan, Keitz, & Wells, 2013). There is an abundance of research validating the effectiveness of cooperative learning when compared to competitive and individualistic learning environments (Johnson & Johnson, 1989; Johnson & Johnson, 2009). Over 120 years of research and 750 studies have been conducted by researchers in various settings and countries (Johnson & Johnson, n.d.). These studies’ participants have varied widely in terms of cultural backgrounds, age, socioeconomic class, and gender. The breadth of the studies that have been conducted gives social interdependence theory wide generalizability and considerable external validity (Johnson & Johnson, n.d.).

Background of the Problem

Language learners, regardless of the context, learn at different rates and in different sequences (Brown, 2007). Students with the same cognitive ability profiles who study in the same classroom do not necessarily achieve the same results (Brown, 2007). This leads to questions about the learning environment and in particular the teaching models being employed and students' responses to these models.

Despite the evidence that cooperative learning can have a positive effect on learning, there is some evidence that not all students respond to small group work positively (Cantwell & Andrews, 2002; Emerson, English, & McGoldrick, 2015). One's personality plays an important role in how receptive a student will be to instruction in a cooperative learning environment. Cantwell and Andrews (2002) found that individual levels of social anxiety played a major role in how secondary students in Australia responded both cognitively and psychologically towards small group work. Similarly, Emerson, English, and McGoldrick (2015) found that certain personality types perceived cooperative learning activities as being less satisfying than activities that were more independent in nature. They went on to say that "Heterogeneity in students' personality types, which influence students' preferred learning process, could translate into differences in students' preferences regarding cooperative learning activities, their perceptions of interaction levels, and the degree to which their interest is stimulated by different assignments and tasks" (Emerson et. al, 2015, p. 21). A study by Thompson, Antisal, and Barrett (as cited by Forrester & Tashchian, 2010) found that depending on personality type, group members' comfort and satisfaction in working collectively rather than individually and the tendency towards individualism versus collectivism was influenced by what the researchers refer to as group work orientation. Forester and Tashchian (2010) expressed concern about the generalizability of

results of the various studies on personality effects and cooperative learning. They have made a call for research on specific personality characteristics related to group collaboration in classrooms. For example, negative classroom tension may occur if a learner with preferences for independence is placed in a cooperative learning situation which requires them to work interdependently.

Individual personality differences also have an effect on language learning. ESOL teachers should take into account individual differences in language learning, especially those that have been found to be the most consistent predictors of second language learning success, yielding language attainment in instructed settings in ranges of 0.50 and above (Dörnyei, 2005). It seems that language teaching is as much about teaching learners as it is the language. Teachers who use cooperative learning in their classes could benefit by having a thorough understanding of the connection between personality type and students' preferences and levels of comfort working in small groups (Emerson et. al., 2015). This knowledge could prove to be useful in several ways including: setting up small groups with the aim of accommodating students' personalities, communicating to students about how they can most effectively function together, and anticipating and mitigating students' negative responses to working cooperatively based on their individual personalities (Emerson et. al., 2015).

While research indicates that students can learn cooperatively, many issues have not been resolved around the use of cooperative learning. One major obstacle is that teachers who employ cooperative learning are encouraged to create mixed-ability, heterogeneous teams with one high achieving student being paired with two middle achieving and one low achieving student (Johnson, Johnson, & Holubec, 1990, 1998; Kagan & Kagan, 2009). The argument for such grouping is that it will increase opportunities for peer tutoring and support and make classroom

management easier since the high achiever will function as a peer tutor for the other group members (Kagan, 1994, p.7.4). However, McCaslin and Good (1996) point out that in such circumstances there is the potential for the high achievers to express misgivings about group work. The high achievers may feel that this is an unfair burden for them to take on as students. In a similar vein, the high achievers may also feel that they are ultimately responsible for all the work the group does. In contrast, lower achieving students may not have an opportunity to take ownership of the group's work nor contribute meaningfully to accomplishing the learning tasks. Lower achieving students may feel that their contributions are not valued and/or that they are indebted to the other group members for doing the group's work. High achievers, who process information at a faster rate, may also push the group to focus on completing the finished product as quickly as possible which may not give the lower achieving students enough time to process the work they are doing. It is also likely that high achievers will withhold information or withdraw from the process for altruistic reasons such as giving other group members a chance and/or to not be seen as "know-it-alls" with their peers (Mulryan, 1995). Another potential risk occurs when the high achievers of the group may not know the academic content or have misconceptions about it. If they act as the intellectual leaders of their groups, then it is possible that these misconceptions may be reinforced during the cooperative learning interaction. Mulryan (1995) argues that when students play the same general roles in their groups consistently, it may create a "caste" system that discourages the active involvement of some members, especially the low-achieving female students.

Another issue when using cooperative learning groups is student passivity. Mulryan (1995) identifies six types of passive students: the discouraged student who feels the group's task is too difficult, the unrecognized student who feels he/she is being ignored by the rest of the

group, the despondent student who does not get along with one or more of the other members of the group, the unmotivated student who does not see the utility of the exercise, the bored student who finds the task to be uninteresting or not challenging enough, and the intellectual snob who does not want to help group members who are not at his/her advanced level. Mulryan (1995) also identifies three types of students who are active but off task: 1) the social opportunist who spends time talking to peers about subjects unrelated to task at hand, 2) the intentional loafer who tries to get their group off task so nothing will be accomplished, and 3) the alternatively involved who are off task but working on some other school work individually for example reading a book or doing homework from another class.

Likewise, Johnson and Johnson (2003) recognize that social loafing is an issue that needs to be addressed in cooperative learning classrooms. They describe social loafing as a lack or reduction of individual effort while working with others on a group task(s). Johnson and Johnson (2003) claim it is most likely to take place when members of a group do not have identifiable responsibilities or expected contributions, the group finds the task to be boring or intrinsically disinteresting and of little importance, they feel no commitment to the group or lack group cohesion, and some in the group feel other members are not making enough of an effort.

Another issue when using cooperative learning in the classroom is that some students may be looking for a free ride. With social loafing, students try to go unnoticed in their work groups. Johnson and Johnson (2003) describe free riding as getting something for nothing. Some students may attempt to reap the benefits from working on a group project (i.e., get a good grade) without actually doing any work and letting others be responsible for the work getting done. If teammates recognize that others are not putting forth a fair amount of effort, then they may lose motivation due to the injustice and inequality they perceive. It is very rare to find a

person who is willing to carry the load for their group if they feel they are being taken advantage of by the social loafers and free riders.

McCaslin and Good (1995) identified several other potential issues which might prevent or minimize constructive learning in cooperative learning groups. Students often have misconceptions about academic content and these may be reinforced in cooperative learning interactions (i.e., the blind leading the blind). Cooperative learning may shift dependency off of teachers and on to peers rather than building interdependence. Product may take precedence over process so very little cooperative learning takes place, or process may take precedence over product and little content knowledge is gained. When high achievers perform most of the work, low achievers, who may not have had a chance to contribute, may feel indebted to the other group members. They may also get the message that their contributions are not appreciated. And finally, the high achievers seeming altruistic behavior may come at the expense of learning on the part of the low achievers.

The use of cooperative learning, while holding great promise, does also include several challenges as outlined above. Students do not always work together in a productive fashion due to personality issues (Cantwell & Andrews, 2002; Emerson, English, and McGoldrick, 2015). Group dynamics can also contribute to difficulties in the use of cooperative learning including such issues as positivity, social loafing, free riding, and blind leading the blind (Mulryan, 1992; McCaslin & Good, 1995; Johnson & Johnson, 2003).

Statement of the Problem

As a high school English teacher of ELLs, I have noticed over the past five years that students using Kagan cooperative learning (CL) structures, which are mandated by the school district, display varying levels of interest in working cooperatively and likewise seem to put forth

varying levels of effort while working in such groups. Some students seem eager to work with their partners and small groups while others seem to be reluctant to fully participate in such activities. Personality in all likelihood contributes to these differences.

Purpose of the Study

This study attempts to link one personality trait, extraversion/ introversion (E/I), with secondary school ELL's success on a parts-of-speech/grammar test while studying in a cooperative learning environment. Students' levels of extraversion may influence how and how much they interact within cooperative learning groups. Individuals who consider themselves to be extraverts are thought to focus their attention and get their energy from the outer world of people and activity. They are described as being social, gregarious, active, assertive, passionate, and talkative. In contrast, individuals who consider themselves to be introverted focus their attention and get their energy from the inner world of ideas and experiences and are described as being passive, quiet, reserved, sober, withdrawn, aloof, and restrained (Dörnyei & Ryan, 2015).

It is hoped that this study might contribute to a greater understanding of how cooperative learning activities impact learning English grammar for students at either end of the extraversion/introversion spectrum.

Research Questions

- 1) Is there a difference in students' grammar proficiency development in ESOL classes employing small group cooperative learning activities versus whole-class instructional grouping?
- 2) How does student achievement differ between cooperative learning groups and whole-class instruction groups in relation to levels of extraversion?

- 3) How does a selected sample of students from secondary school ESOL classes describe their learning experiences in cooperative learning groups and in whole-class groups?

Rationale

There are two ways in which this study might prove meaningful. First, it might be helpful for ESOL educators by contributing to a better understanding of how extraversion/introversion influences students' learning processes, influence classroom interactions between students, and students' second language acquisition and in particular grammar development. It may offer ESOL teachers some insight into how to go about maximizing students learning experiences in a cooperative learning environment based on their levels of extraversion.

The second reason is that the picture is not clear about whether extraversion is helpful in the context of second language acquisition. Previous studies have primarily focused on E/I's role in attaining one of the four macro skills (reading, writing, listening, and speaking) or in a particular context such as a country (Alavinia & Sameei, 2012; Altunel, 2015; Chen, 2013; Dewaele & Furnham, 2000; Hassan, 2001; Sharp, 2009; Wakamoto, 2007). The results to date are inconclusive and have shown that in some situations, introverts have achieved better results, and in other cases extraverts have been shown to be more successful in their language studies. This study, which takes into consideration both the context and the development of grammar skills, is focused on E/Is influence on learning a second language in a cooperative environment where students are encouraged to learn interdependently.

Definition of Terms

For the purpose of the study, the following definitions were used.

Cooperative Learning (CL): Cooperative learning is “the instructional use of small groups so that students work together to maximize their own and each other’s learning” (Johnson et. al., 1990, p. 4).

English Language Learners (ELLs): “English Language Learners” refers to people who speak a first language other than English, and learn English as an additional language.

English for Speakers of Other Languages (ESOL): The term ESOL is generally used when describing programs designed for ELLs who seek proficiency in social and academic language; ESOL programs, which may also be referred to as English as a Second Language programs, generally teach basic grammar, vocabulary and colloquial terms and phrases to ELLs (What is an ESL Teacher?, 2016).

Introversion (I): Introversion is the state of or tendency toward being wholly or predominantly concerned with and interested in one's own mental life (Introversion. n.d.). Introverts often take pleasure in solitary activities and are described as passive, quiet, reserved, withdrawn, sober, aloof, and restrained (Dörnyei, 1994, 2005).

Extroversion (E): Extraversion is the state of primarily obtaining gratification from outside oneself (Extroversion, n.d.). Extraverts tend to enjoy human interactions and are described as sociable, active, talkative, assertive, passionate, and gregarious (Dörnyei, 2005)

Assumptions

It is assumed that all ESOL sections are on the same content/concept learning schedule. It is assumed that all students have the same resources available to them. It is also assumed that the students possess basic computer knowledge and skills, and are familiar with the internet, and have access to internet-based resources while in class.

Limitations

Generalization of the findings are limited as the data came from an ESOL program at a Midwestern high school and all participating students were enrolled in ESOL courses. The report of findings may not represent other ESOL students in different geographical areas, in other ESOL courses, or at other types of secondary schools. The variability of student use of English outside of class and access to online materials may have an influence on the results. Attendance can promote or limit learning opportunities.

Summary

The purpose of this mixed methods study was to investigate secondary ELLs grammar development in English when being instructed in small, cooperative learning groups and when receiving whole-class instruction. The study also investigated what effect the personality trait of extraversion had on the students studying in cooperative learning groups. For the quantitative portion of the study, student growth in grammar was measured using a pretest/posttest format. For the qualitative portion of the study, eight students were interviewed prior to the treatment and again at its conclusion about their experiences working in small, cooperative groups and large, whole class settings.

Following this introduction, Chapter 2 provides a review pertinent research literature on cooperative learning, the personality trait of extraversion (E/I), and second language acquisition. Chapter 3 describes the research methods and procedures used in this study. Chapter 4 presents the study's findings. Chapter 5 includes a discussion of the findings and presents some conclusions based on the study as well as implications for further research.

Chapter 2: Review of the Literature

Cooperative learning (CL) and Individual Difference (ID) are based on clearly formulated theories, each of which build and expand upon our understanding. This review of the literature begins by discussing the theory behind CL, starting with Constructivist theory and its influence on education, followed by a discussion of Social Constructivist theory which in turn leads to a discussion of Social Interdependence theory. Together these theories provide a rationale for using cooperative learning in the classroom. Following the discussion of theory, literature on the use of cooperative learning will be reviewed. The next section of the chapter focuses on theories underpinning ID, personality, and extraversion and introversion (E/I). The literature on E/I effects on language learning is reviewed. Follow the discussion of IDs, there is a discussion of theories and a review of literature related to second language acquisition and the roles of input in language learning, learning versus acquiring a second language (L2), consciousness raising in SLA, and social interaction as it too relates to learning a L2. Chapter two concludes with a brief review of the literature that connects the three primary components of this study: cooperative learning, extraversion/introversion, and language learning.

Theoretical Framework of Constructivism

Cooperative learning is a student-centered approach to learning and therefore it is based on constructivist learning theory. Constructivism is a philosophical viewpoint about the nature of knowing. The basic premise behind constructivism in education is that students learn and develop new knowledge by a process of actively building (i.e. constructing) upon their previous knowledge. Piaget (1926) and Dewey (1938) are credited with developing these ideas as they relate to student-centered approaches to education, but the roots of constructivism can be traced much further back to Socrates (Good & Brophy, 2008). Piaget (1971) claimed that learners

appropriate new knowledge and then assimilate it into their existing knowledge or if the new knowledge is not consistent with the existing knowledge, they will accommodate the new knowledge to create an equilibrium. Cognitive growth will occur when the equilibrium is maintained and knowledge is constructed and reconstructed in relation to the existing knowledge by the learner (Piaget, 1971).

Constructivist contend that humans do not passively receive information and make copies of it in their minds, but instead they must actively process new information in an effort to make sense of it and relate it to previous knowledge on the subject. Marlowe and Page (2005) differentiate traditional learning (information transmission) and constructivist learning in four ways. First, constructivist learning is constructing knowledge, not receiving knowledge as in traditional learning. Second, traditional learning focuses on retention, but constructivist learning focuses on understanding and applying. Third, constructivist learning requires thinking and analyzing, whereas traditional learning requires accumulating and memorizing. Finally, constructivist learning is dynamic and not passive. The construction of knowledge is a messy process. Distortions and omissions are not uncommon while each student creates in their minds their own unique representation of what was communicated to them. Different learners with the same information may construct different understandings based upon their prior knowledge. Constructivists emphasize the need for teachers to move towards a knowledge construction model over an information transmission model. Teachers are expected to have a good understanding of their students' existing knowledge, so that they know where to begin helping them build new knowledge. In order to build this new knowledge, constructivism involves giving students time to reflect on their learning, discuss the meaning(s) of the information, and use the information to solve problems and make decisions (Good & Brophy, 2008).

Another important concept in constructivism is that the learning process requires experiential learning through real life experience. Constructivists argue that learning should be problem-based and adaptive, so that it challenges faulty schema, integrates new knowledge with existing knowledge, and allows for creation of original work or innovative procedures (Tran, 2013).

New knowledge can be constructed more easily when it can be related to previous experiences and knowledge versus learning it in the abstract. Constructivist contend that we all have vast networks of prior knowledge called schemas. As explained by Rumelhart (1980),

schemas can represent knowledge at all levels-from ideologies and cultural truths to knowledge about the meaning of a particular word, to knowledge about what patterns of excitations are associated with what letters of the alphabet. We have schemata to represent all levels of our experience, at all levels of abstraction. Finally, our schemata are our knowledge. All of our generic knowledge is embedded in schemata. (p. 41)

Schemas provide the context from which knowledge can be meaningfully interpreted (Anderson, 1984). There are many ways teachers can help students activate schema such as by relating new materials to prior knowledge, by drawing analogies, asking for examples, taking inventories, having students suggest solutions, and asking students to make predictions. These are just a few examples of schema activation exercises. Collectively these are known as advanced organizers (Good & Brophy, 2008).

Social Constructivism

Social constructivism in education extends constructivist philosophy by incorporating the role other people/actors have on learning. Piaget's focus was primarily on individual scholars work in isolation as he/she reads texts or interacts with the natural world. Piaget felt that "learners construct and reconstruct knowledge by themselves" (Tran, 2013, p. 106). Social

constructionist recognize that learning very often takes place within social context. So, in addition to learning being a process of constructing knowledge, social constructionist say the learning process works best when it takes place in a social setting where two or more people engage in sustained discourse about a topic (Good & Brophy, 2008). Discussions serve many purposes. For instance, while interacting with others, the participants may be exposed to new inputs (ideas, beliefs, concepts, etc.) that they did not previously know. Discussions also help the participants to articulate their ideas more clearly, which in turn sharpens their conceptions and often leads to the recognition of new connections. This is especially true when exposed to ideas that contradict their own beliefs. These discourses lead to schema that is both better organized and more clearly differentiated (Good & Brophy, 2008). Most classrooms are communities in which learning takes place through social interaction.

Learning which emphasizes the social construction of knowledge has been heavily influenced by Lev Vygotsky. Vygotsky's theorized that children were introduced to new patterns of thought and new understandings by engaging in dialogue with their peers (Jenkins & O'Connor, 2003). He developed a concept known as the Zone of Proximal Development (ZPD). Vygotsky (1978) defines the ZPD as: "the distance between the actual development levels as determined by independent problem solving and the level of potential development as determined through problem solving under the guidance or in collaboration with more capable peers" (p. 86). The ZPD is the range of knowledge and skills that students are ready to learn with the help of others. In other words, they cannot learn it on their own, but they could learn it from someone who has more knowledge than they do at this time. The ZPD is a range. Things that are below the zone are learned easily without help and things that are above the zone are impossible to learn even with help (Vygotsky, 1978). Vygotsky was a proponent of cooperative

activities which helped children learn more effectively than if done so individually, and felt that in the learning process, cooperation and interaction with peers was one of the primary ways intellectual development could be stimulated (Slavin, 2011). “Individual learners first learn through individual to individual social interaction, and then knowledge is individually internalized” (Vygotsky, 1978, p.84).

The social constructivist view of the need for reciprocal interaction in learning has in turn led to the development of social models of teaching (including CL) which emphasize the social nature of learning. Humans learn social behavior from birth and social interactions have a profound effect on formal learning (Joyce, Weil, & Calhoun, 2015).

Social Interdependence Theory

The social interdependence theory concerns cooperation and individual goals being accomplished by the actions of others (Johnson & Johnson, 2005). Thus, social interdependence exists when the outcomes of individuals are affected by their own and others’ actions (Johnson & Johnson, 1989). Outcomes are largely determined by how individuals interact with each other and what type of interdependence structure is present (Deutsch, 1949, 1962; Johnson, 1970; Watson & Johnson, 1972). Social interdependence theory arose from the Gestalt School of Psychology and Kurt Koffka’s work on group dynamics. Koffka proposed that groups were dynamic wholes in which the interdependence could vary (Johnson, Johnson, & Smith, 2013). Social interdependence theory was further refined by Lewin (1935, 1947) and his graduate student, Deutsch (1949). Lewin posited that an intrinsic state of tension exists between goals and actions and this is what motivates human behavior in groups. Group members are made interdependent through their efforts to accomplish common goals (Lewin, 1947). Deutsch (1949) further developed Lewin’s social interdependence theory by conceptualizing both the

positive and negative aspects of human behavior in groups. Positive interdependence exists when there is a positive correlation among individuals' goal attainments. It occurs when an individual in a group perceives that he/she must cooperate with others in the group to attain the group's goals, so they encourage and facilitate one another's efforts to complete the task (i.e., if I win, then we win). There are many examples from the natural world of positive interdependence such as the concept of safety in numbers which is epitomized by a school of fish who demonstrate positive interdependence by sticking together to avoid being eaten. Another example is the sharing of meals as when pack animals hunt together to take down larger animals than they could individually. Negative interdependence exists when there is a negative correlation among individuals' goal achievements. In this case, individuals perceive that they can obtain their goals only if the other individuals with whom they are linked fail to obtain their goals leading to individuals obstructing and discouraging other's efforts to complete the task and reach their goals (i.e., who is going to get the last piece of pie) (Deutsch, 1949). Deutsch also described a third situation in-group dynamics in which no interdependence exists and individuals work independently without any interchange with one another. In this case, there is no correlation between participants' goal(s) or their attainment. In such a case, an individual feels he/she can reach his/her goal(s) regardless of whether or not other group members reach or do not reach their goals (Johnson et. al., 2013). The basic premise of social interdependence theory concerns the way participants' goals are structured determines the ways they interact, and the interaction pattern they develop determines the outcomes of the situation (Deutsch, 1949, 1962). Deutsch (1949) also argued that in cooperative situations, where positive interdependence is present, the following psychological processes are created: substitutability (the degree to which actions of one person substitutes for the actions of another person), inducibility (the

openness to being influenced and to influencing others), and positive cathexis (the investment of psychological energy in objects outside of oneself, such as friends, family, and work). In competitive situations, the opposite psychological processes take place. The lack of social interdependence disconnects individuals from others and as such no substitutability, nor inducibility will be present and there will be negative cathexis (Johnson & Johnson, 2009). Social interdependence can be differentiated from social dependence, social independence, and social helplessness as such:

Social dependence exists when the goal achievement of Person A is affected by Person B's actions, but the reverse is not true. Social independence exists when the goal achievement of Person A is unaffected by Person B's actions and vice versa. Social helplessness exists when neither the person nor others can influence goal achievement (Johnson & Johnson, 2009).

Cooperative Learning Historic Overview

Research on individualistic, competitive, and cooperative environments has one of the longest standing traditions in the field of social psychology. In the late 1800s, Turner in England and Triplett in the United States conducted research studies on cooperation and competition (as cited in Johnson et al. 2013). Current research on the cooperation in classrooms dates back to the 1940's at which time Deutsch was developing the social interdependence theory while working with his psychology classes at MIT (Johnson et al., 2013). Prior to the 1970's almost all research on cooperative learning took place in university classes and research laboratories using university students as the subjects. Since the 1970's, research has been conducted in a wide variety of settings including preschool, elementary, and secondary schools as well as in business and industry (Johnson et al., 2013). Slavin (1991) reviewed seventy studies that used many different forms of cooperative learning for more than four weeks in secondary and elementary

schools. He found 67 studies which showed significantly greater achievement in cooperative classes over control class, and only one study which showed the reverse. Morgan, Keitz, and Wells (2013) reported that over 900 research studies over the last 110 years have been conducted which validate the effectiveness of cooperative learning over competitive and individualistic learning.

Key components and principles. Not all group work in schools should be considered CL. Two or more students working together may be collaborative, but only when the students work interdependently to achieve their goals can it be considered cooperative. The key components of cooperative learning as identified by Johnson and Johnson (2005) are positive interdependence, individual accountability, promotive interaction, social skills, and group processing.

Positive interdependence is the core component of cooperative learning and is the perception that you are linked with others in your group in such a way that you cannot succeed unless everyone in the group does. Your groupmates success leads to your success and the group provides mutual benefits to all (Johnson et al., 2013). There are three types of interdependence: outcome interdependence means interdependence, and boundary interdependence (Johnson & Johnson, 1992, 1999). When a group of people work towards a desired goal, reward, or state of being, they can work either cooperatively or competitively. Outcome interdependence which focuses on goals and rewards leads to group members specifying the actions that are required for them to accomplish the desired outcome. If there is no outcome desired, then no interdependence is needed. Means interdependence includes resource, role, and task interdependence that are not individually based and are overlapping. Finally, boundary interdependence is concerned with who is working interdependently with whom. Groups are

separate entities and may be segregated from other groups by the environment (e.g., different rooms or parts of a room), by traits (e.g. males/females, age, color of shirt), by proximity (shoulder and face partners), by shared history together, by group expectations (what is the purpose of the group), or by some other difference (Johnson et al., 2013).

It is thought that positive interdependence creates an environment for the enhancement of learning. When individuals in a group recognize that their performance affects the success of their group mates, it seems to create a sense of responsibility that increases their efforts to achieve. This seems to be born out in research where researchers have found that positive goal interdependence is a key to higher achievement and productivity in CL. Group membership and interpersonal interaction, by themselves, have proven insufficient in generating gains in achievement (Mesch, Johnson, & Johnson, 1988; Mesch, Lew, Johnson, & Johnson, 1986).

The second component of cooperative learning is individual accountability and personal responsibility. Individual accountability exists when each member of the group is judged or assessed on their contribution to the group. In cooperative learning, every member of the group has a personal responsibility to complete their share of the group's work and to help facilitate the work of groupmates. When a person in a group realizes his/her work impacts the final assessment of the rest of the members of the group, they feel responsible for not only their personal results, but also for the results of the rest of the group members (Matusi, Kakuyama, Onglatco & Guion, 1987). In other words, failing as an individual is painful, but failing the entire group is extremely painful. The purpose of cooperative learning is to build each member up in his or her own right. There is some research supporting the need for individual accountability. One study conducted by Hooper, Ward, Hannafin, and Clark (1989) found that cooperation resulted in higher achievement when individual accountability was structured than

when it was not. Another study found that increasing individual accountability resulted in increases in perceived interdependence among group members (Archer-Kath, Johnson, & Johnson, 1994).

A third key component of cooperative learning is promotive interaction. Promotive interaction occurs when students promote each other's growth and development (Johnson & Johnson, 1989). Some examples of promotive interaction are orally explaining how to solve a problem or discussing a problem with groupmates, teaching group members how to do something, or challenging group members' reason, logic, and conclusions. Promotive interaction also helps to build group members interpersonal skills as they celebrate joint successes, encourage one another's efforts, and use appropriate social skills (Johnson et al., 2013).

Two other types of group interaction are negative interaction and oppositional interaction. When no members of the group support any other members of the group, negative interaction takes place. In such a case, all group members oppose each other's success. Oppositional interaction takes place when an individual in the group tries to be successful only for himself or herself while at the same time discouraging the rest of the members of the group (Johnson et al., 2013).

The appropriate use of social skills is the fourth key component of cooperative learning (Johnson & Johnson, 1989). Social skills like leadership, decision-making, trust-building, communication, and conflict-management do not always develop automatically in groups, but rather often times must be taught intentionally. Teachers who implement cooperative learning in their classrooms would be wise to set aside time for social skills instruction. One reason for doing so is that it was found that a combination of positive goal interdependence and social skills training helped socially isolated and withdrawn students to achieve more positive academic

results (Mesch et al., 1986; Mesch et al., 1988). It was also found that by giving students individual feedback on the frequency with which they used targeted social skills, on which they had been trained, participants' academic achievement increased. Social skills training also led to the development of more positive relationships within groups (Archer-Kath et al., 1994).

The final key component of cooperative learning is group processing. Group processing occurs when members designate time to review their performance and look for ways to improve upon their efforts. Continuous improvement should be encouraged by teachers using CL. One way to do this is by asking students to describe what they did as a group or individually that helped the group succeed as well as what obstacles they created for themselves. This, in turn, should lead to a group discussion on what behaviors should be continued and which should not be. Other aims of group processing are to look for ways to work more efficiently and making the learning process simpler, eliminating wasted time or wasted efforts by avoiding errors, developing teamwork, and recognizing and celebrating both hard work and achievement (Johnson et al., 2013). Within cooperative groups, group processing (compared with cooperation without group processing and individualistic efforts) has been found to increase the achievement of high-, medium-, and low-achieving individuals' problem-solving success, achievement motivation, uniformity of achievement among group members, and attempts to influence group mates toward higher achievement (Archer-Kath et al., 1994; Johnson et al., 1990). Group processing also resulted in more positive relationships between participants with and without disabilities (which carried over to post-instructional free-time situations), greater self-esteem, and more positive attitudes toward the subject area (Archer-Kath et al., 1994).

Kagan (2009) developed a slightly different set of key components to distinguish cooperative learning from group work. He refers to them as the basic principles of CL. The first

two are the same as Johnson and Johnson, positive interdependence and individual accountability. The third principle is equal participation. Kagan argues that for equitable educational outcomes to occur, participation during cooperative learning needs to be relatively equal. It takes time to master a new skill and extensive practice is usually necessary. If students do not interact while working in their groups regardless of the reasons, they will not be able to learn as much nor do as well on assessments. “Students who ask for and receive adequate help from teammates during team interactions tend to do well on later tests, as opposed to those who did not ask for help or did not receive the required help” (Kagan, 2009, p.12.14-15). To give students equal time to participate, six strategies are suggested. The first is turn-taking, in which students are given an equal number of chances to contribute to their groups. The second is time allocation. In this case, students are given an equal amount of time to share with the group for instance each student is given thirty seconds to contribute. The third strategy is think and write time in which all students are given a few moments to think through and formulate their answers before being put on the spot to contribute. Without think and write time, only the fastest thinkers and/or talkers are immediately ready to share. The fourth is to create rules that equalize engagement. As an example, one such rule could be that no one in the group is allowed to answer a second question until everyone in the group has answered an initial one. Individual accountability is also a strategy to equalizing participation. In this case, every student in the group knows that everyone else in their group is going to see their work which makes it more likely that they will participate. The final strategy for equalizing engagement is to assign roles for each of the participants to fulfill. However, teachers need to be careful with assigning roles that each of the roles is seen by the students as necessary and unique (Kagan, 2009).

Kagan's final basic principle is that there should be simultaneous interaction in order to increase active engagement in the groups as well as increase student learning. When students are off task, it is difficult for them to learn as much or as well. Kagan argues that, "simultaneous interaction is the most powerful tool we have for increasing student engagement" (Kagan, 2009, p.12.19). Kagan points out that in a teacher-fronted class that uses whole-class instruction with thirty students in which the teacher tries to have equal participation, at any one moment in the class only 3.33 % of the students will be engaged, and each student will average just two minutes of participation time in an hour-long class. This is in contrast to students working in groups of four in which active engagement increases to 25% and participation time per student increases to fifteen minutes per hour. If pair work is involved, then there is a 50% participation rate and students would average thirty minutes of participation time in an hour-long class (Kagan, 2009). Another argument supporting the principle of simultaneous interaction is that it saves instructional time especially when students must make presentations. If you have 20 students in a class doing three-minute book reports, then it will take sixty minutes for everyone to present to everyone in the class, whereas if students present to a partner, it will only take six minutes. The students will have presented the same number of times, but the instructional time used decrease significantly. Kagan uses the acronym PIES as mnemonic device and states, "The PIES principles are what set cooperative learning apart from other approaches to instruction; the PIES principles are the lynchpin to successful CL" (Kagan, 2009, p. 12.1)

Approaches to cooperative learning. Two approaches to cooperative learning which are found in the research are the Learning Together approach developed by Johnson and Johnson and the Structure approach developed by Kagan (Oxford, 1997). The learning together approach requires teachers to create lesson plans with multiple steps. The structure approach is made up

of learning structures that can be repeated as often as need and applied to different lesson objectives.

Johnson, Johnson, and Holubec (1990, 1998) recommend eighteen steps as their Learning Together approach to creating cooperative learning lessons. The eighteen steps are part of five sets of strategies. The first strategy is to clarify specific objectives for the lesson. This step includes setting both an academic objective(s) and a collaborative skills objective(s). The collaborative skills objective is necessary to train students to work cooperatively together. The next strategy is making certain that students are grouped together with the learning objectives in mind. Some lessons work better with students working in pairs, others may require groups of up to six students to fulfill all of the roles that are required. It is important to keep in mind that as the size of the group gets larger so does the complexity of the groups interactions and the need for better interpersonal and group communication skills. Time is also an important consideration when grouping students, and in general, the shorter period time available, the smaller the groups should be. While planning the groups, teachers should take into consideration if the lesson would be best served by having students work in homogeneous or heterogeneous groups, if students who have difficult relationships with one another should be place together, if giving students autonomy in selecting their groups members is appropriate, and if the groups will be working together for a short period of time (a class or two) or long term (several months). During the group phase, it is also recommended for teachers to plan how they want the room arranged to support group interactions. The next strategy is to clearly explain the task and goal structure to the students. Usually this takes the form of direct instruction in which the teacher explains what the task is, what the outcomes should be, and what concepts or procedures must be considered. The teacher should also check the students' comprehension of the assignment's

requirements and give the students an opportunity to ask questions about it. The teacher should also make sure the lesson is structured in such a way that goal interdependence is achieved and that the students understand that everyone in the group is responsible for learning the assigned materials. Two ways this can be done are asking the groups to produce a single product that each student must be prepared to present (in the event that the teacher asks a random student from each group to do so) and providing group rewards rather than individual rewards. The teacher should also make it clear that each student will also be held accountable as individuals for knowing the academic content. This can take the form of a test, calling on individual students randomly to explain their group's answer(s), having members of one group teach members of the other group(s), having students do a first draft on their own before bringing it to the group, etc. Teachers should also consider having groups work cooperatively by checking in with and helping other groups. This extends the benefits of cooperation to the whole-class. It is also recommended that teachers evaluate on a criteria-referenced versus norm-referenced basis so students are not encouraged to compare and compete. Students need to know what behaviors are appropriate and expected of them while they work cooperatively, and the teacher would be wise to specify what their expectations are in this regard. The fourth strategy is monitoring and intervening. The bulk of the teacher's time and effort will come at this stage of the lesson. Teachers should monitor the groups and praise positive behaviors such as turn taking, asking questions, summarizing, active listening, and contributing ideas. Teachers should intervene when students need assistance by clarifying, re-teaching, and elaborating when necessary. Intervening when students are not working cooperatively and teaching collaborative skills is also important at this stage of the lesson. The final strategy is to evaluate and process. As with all lessons, teachers should assess how successfully the students completed the task and give them

feedback. It is also important at this stage of the lesson to have the students evaluate how well their group functioned, what ways they could have collaborated more effectively, and what they did well while working together. This processing can be done at the individual, group, and class level. This is also a very important part of the individual accountability piece as students should be encouraged to honestly evaluate the other members of their group's performances. The final step is to provide some type of closure for the lesson by reviewing the important points and summarizing each group's work. These five strategies are very adaptable and will work with nearly any lesson. The most important thing to keep in mind is that positive interdependence, individual accountability, group processing, and social skills have been built into the lesson plans in multiple ways.

The second approach relies on the concept of structures as developed by Spencer Kagan in the 1970's (Kagan, 2009). Kagan claims that the first key to success in using cooperative learning is the use of structures and defines a structure as "the way the teacher organizes the interaction in the classroom at any moment" (Kagan, 2009, p. 5.2). Structures define what the teacher is doing, what the students are doing, and how the academic content is being processed. Lecturing is a structure; however it is not a cooperative learning structure. To be a cooperative learning structure it must have student-to-student interaction and include each of the basic principles (PIES) discussed in the previous section. Structures are content-free which means the same structure can be used to deliver an infinite range of content. They are also repeatable so they can be used many times during a class, but with different content. Because structures are content-free and repeatable, each time one is used it creates a new learning experience. There are currently over 200 such structures, with each structure designed to achieve different educational objectives. Some structures help to build cooperation at the class and group levels.

Other structures are aimed at building basic knowledge and skills, such as thinking skills. With a structure approach to CL, the most important duty of the teacher is to pair an appropriate structure with the objective of a particular lesson.

In addition to the first key of structures, Kagan (2009) suggests six other keys to successfully using cooperative learning in classrooms. The second key is team assignments of which there are four: heterogeneous (mixed- ability, gender, ethnicity, language), homogeneous (similar- ability, gender, ethnicity, language), random (by chance), student-selected (free choice). The third key is the efficient management of teams including such things as noise levels, room arrangement, seating assignments, materials, giving directions, and solving interpersonal disagreements on teams. The fourth key is class building. This is the process by which a room full of individuals with different backgrounds, interests, experiences, and personalities becomes a learning community with a common purpose(s), and a space in which each of the students feels they belong and are accepted by the rest of the group. Key five is teambuilding which occurs when students are placed in their groups and are encouraged to create a team identity, support one another, and develop interdependence. The sixth key is developing social skills. Social skills are imperative for cooperative learning to be successful and includes such things as active listening, asking for and giving help, conflict resolution skills, leadership skills, sharing, consensus seeking, responsibility, appreciating and encouraging others, and respect. The final key is that the positive interdependence, individual accountability, equal participation, and simultaneous interaction (PIES) are present while implementing the structure.

Cooperative learning in general education. There are many reasons why a teacher would employ cooperative learning as an instructional strategy. In heterogeneous classes with students coming from a multitude of racial, socioeconomic, and cognitive backgrounds, it can

often be very difficult to engage all students simultaneously in high quality learning tasks.

Proponents of cooperative learning make the claim that when students interact with their peers to accomplish shared goals, they not only gain academically but also socially (Johnson & Johnson, 2002; Slavin, 1996). Johnson & Johnson (1996) found that students in cooperative learning groups whether they were formal, informal, or cooperative-based groups make greater achievement gains than do students in competitive groups, use higher-level reasoning strategies more frequently, build more complete and complex conceptual structures, and retain information learned more accurately. Gillies and Boyle (2009) claim that students interacting in groups are able to construct new understandings as well as clarify differences in understanding. Socially, students in cooperative learning groups build more positive and supportive relationships including relationships with students who are different from themselves. Another advantage of cooperative learning groups is that students use a higher level of discourse when working with peers and are more likely to ask for help from others in their group (Gillies, 2003). Students in cooperative learning groups also learn to use language in new ways and in turn to construct new ways of thinking and feeling (Mercer, 1996). Linguistically, the students show greater participation in discussion and hold discussions at more sophisticated levels while providing more intellectually valuable contributions (Gillies, 2006). Kagan (1989) argues that cooperative learning is superior to individual and competitive learning environments for most students and in nearly all situations. He points out that in whole-class discussions and question and answer sessions, students must vie for the teacher's attention and praise which leads to negative interdependence as only one student has a chance to answer the question while the others lose their opportunity to do so. He goes on to say, "In such a classroom, students are set against each other, creating poor social relations and peer norms against achievement" (p. 13). Kagan highly

recommends using cooperative structures to make the classroom less competitive and more democratic as all students have more opportunities to build positive interdependence. Another aspect of the traditional classroom Kagan is critical of is that students may opt out and choose not to participate if they do not know the answer or are not daring enough to voluntarily participate. Opting out is commonplace for “shy students, lower achievers, and early language learners. The result is that “they don’t learn as much or as quickly” (Kagan, 2009, para.8). By using a cooperative learning pair structure, it only takes about two minutes to give every student in the class a full minute of language output opportunity. Contrast this with a typical teacher led classroom using whole-class question-answer, the same amount of oral language output per student would take over an hour because the teacher is asking a question and responding to each student one at a time (Kagan, 2002). The theoretical and practical arguments in favor of using cooperative learning are very persuasive. However, no teaching strategy is perfect and this holds true for cooperative learning as well.

While the potential advantages of cooperative learning give teachers good reason to use it in their classrooms, it is not without its challenges. One major obstacle is that teachers are encouraged create mixed-ability, heterogeneous teams with one high achieving student being paired with two middle achieving and one low achieving student as recommended by Kagan and Kagan (2009). The argument for such grouping is that it will increase opportunities for peer tutoring and support and make classroom management easier as the high achiever will function as a teacher aide for the his/her other group members (Kagan, 1994). However, McCaslin and Good (1996) point out that in such circumstances there is the potential for the high achievers to feel excessive pressure to do the work of the group. The high achievers may feel that this is an unfair burden for which they did not ask if they are expected to be teacher aides. In a similar

vein, the high achievers may also feel that they must be ultimately responsible for all the work the group does and the low achievers may not have an opportunity to take ownership of the groups work nor contribute in a genuine fashion to accomplishing the work. Lower achieving students may feel that their contributions are not valued and/or that they are indebted to their group mates for doing the group's work. High achievers, who process information at a faster rate, may also push the group to focus on completing the finished product as quickly as possible which may not give the lower achieving students enough time to process the materials on which they are working. It is also likely that high achievers will withhold information or withdraw from the process for altruistic reasons such as giving other group members a chance and/or to not be seen as "know-it-alls" with their peers. Finally, there is a risk that the high achievers may not know the academic content or have misconceptions about it. If they act as the intellectual leaders of their groups, then it is possible that these misconceptions may be reinforced during the cooperative learning interactions.

Another challenge in the use of cooperative learning is what Johnson and Johnson (2003) describe as social loafing. Social loafing occurs when individual effort is reduced when working with others on group tasks. In other words, a student does not give his/her best effort when they are doing group work, but rather just enough to get by. Its effect can be increased depending on the situational and social factors. Johnson and Johnson (2003) claim it is mostly likely to take place when members of a group do not have identifiable responsibilities or expected contributions, find the group's task to be boring, intrinsically disinteresting and of little importance, feel no commitment to the group or lack cohesion within the group, and/or members of the group feel their teammates are loafing. Some students may choose not to participate fully in cooperative learning activities because they hope to just get lost in the crowd.

A third challenge with cooperative learning is that some students may be looking for a free ride. With social loafing, students try to go unnoticed in their work groups and put out as little effort as possible. Johnson and Johnson (2003) describe free riding as “getting something for nothing” (p. 302). Some students may attempt to reap the benefits from working on a group project (i.e. get a good grade) without actually doing any work and letting others be totally responsible for the work getting done. If teammates recognize that others are not putting forth much effort than they may lose motivation due to the injustice and inequality they perceive. It is very rare to find a person who is willing to carry the load for their group if they feel they are being taken advantage of by the social loafers and free riders.

Cooperative learning in language learning. Cooperative learning has been used extensively in language learning classrooms. Kagan (2009) supports the use of cooperative structures when working with ELLs and offers the following seven advantages for its use: 1) greater language use is encouraged because students have more turns than they would in a whole- class exercise, 2) greater comprehensible input as students adjust their speech to the level of their partner (s) as they are working together, 3) the negotiation of meaning as students have the opportunity to adjust their language output to make sure they understand each other, 4) the natural context of the language is used in real-life, functional interactions which help to reduce problems of transference, 5) lowered affective filters working with small groups versus speaking out in front of the entire class because it is easier for students to talk with supportive partners and/or teammates, 6) peer support encourages students to help each other’s language development, 7) enhanced motivation because the cooperative learning structures are engaging interaction sequences, and when students need to understand each other, there is high motivation to speak and to listen for understanding. DeVillar, Faltis, and Cummins (1994) suggest four

benefits of using cooperative learning with ELLs: it helps create environments that are predictable and accepting of all students, cooperative learning instructional activities maximize opportunities for language use, cooperative learning instructional tasks involve students as active participants, cooperative learning instructional interactions provide support for student understanding, and cooperative learning instructional content utilizes student diversity. One of the biggest benefits of cooperative learning is believed to be that students get more practice using the second language (Calderón, 1998). Students receive more inputs while working in small groups and also have an opportunity to produce more outputs. Several earlier studies considered environments in which student worked in small groups versus teacher-fronted classrooms. Pica and Doughty (1985) found that individual students working in small groups had more opportunities to practice using English as a second language and engage in more direct interaction in groups than in teacher-fronted discussions. The researchers found that students took more turns, produced more content in the target language, and received more feedback from other group members. Doughty and Pica (1986) found that group work and pair work led to significantly more negotiation for meaning with 66% of the total talk time in small groups, 68% of the total talk time in dyads, but just 45% of total talk time in a whole-class setting. Bejarano (1987) found that seventh grade Israeli students improved both their listening and overall language abilities while using cooperative learning and a communicative approach to learning English as opposed to teacher-fronted, whole-class instruction. Klingner and Vaughn (2000) found that fifth grade ESL students improved their reading and vocabulary skills in English, but also found that the students were very capable tutors and provided supportive feedback while working in cooperative learning reading groups. Porto (2001) found that cooperative learning helped her university students in Argentina to become more reflective in their writing and better

overall writers while working in small groups as compared to the lecture-based classes that they were previously offered. Yazdani-Moghaddam and Fakhraee-Faruji (2013) studied the effects of cooperative learning on the lexical development of Iranian students. Their analysis indicated significant differences between the performance of the experimental group who had been taught using cooperative learning methods and the control group who had been taught using traditional teacher-centered methods. The study provides evidence that cooperation is a more effective tool for teaching vocabulary. The researchers believe cooperative learning offers the advantages of providing students in groups with an opportunity to communicate more with each other, to negotiate and to find a common solution. Opportunities for using the L2 and responsibility and control in the classroom are shifted towards the learners and they are encouraged to use the L2 with each other rather than only with the teacher. In their review of the literature on cooperative learning in ESL classes, Liang, Mohan, and Early (1998) agree with this position stating that existing research "seems to support the belief that cooperative learning offers second language learners more opportunities for interaction in L2 and helps them improve second language proficiency" (p. 14).

In addition to having more opportunities to practice the L2, students working in groups also improve their accuracy in the L2. Durán and Szymanski (1995) found that language minority children construct their understanding and use of English by correcting each other's pronunciation and language forms as well as commenting, collaborating, and elaborating during the construction of a story. Romney (1997) reported that students arrive at a greater degree of grammatical correctness, accuracy, and faithfulness through discussion and negotiation when they are required to justify their positions while arguing about specific cases or situations. Calderón, Hertz-Lazarowitz, and Slavin (1998) found that third grade students who experienced

a bilingual Cooperative Integrated Reading and Composition intervention showed gains both in Spanish and English reading performance in comparison with control classes that used traditional textbook reading methods. One possible explanation for the ability to do so is that “cooperative learning engages students in frequent cognitively complex interactions around the solution of real problems” (Calderón et al., p. 163). The authors went on to say that “for students to reach high levels of proficiency, they must engage in a great deal of oral interaction, jointly negotiating meaning and solving problems”(Calderón et al., p. 154).

It has also been argued that cooperative learning is beneficial because it more easily accommodates both the learning of academic content while at the same time helping students progress in their language skills. Kagan and McGroarty (1993) argued that:

By providing a variety of ways to expose students to academic content and creating different situations in which they experience and discuss curriculum content, cooperative learning serves both language and content curriculum goals. Through cooperative learning, there is improved comprehension and production of language, and both these outcomes aid attainment of subject matter goals. (p. 47)

McGroarty (1989, 1992b) examined a number of studies that have been conducted in the effects of cooperative learning for L2 instruction. She concluded that the principle benefit of cooperative learning is that it offers additional ways to incorporate academic content into language instruction in both ESL and bilingual learning environments. Mohan and Smith (1992) looked at cooperation between the instructor and the students. The purpose of their study was to investigate how and why a group of Chinese students were able to succeed in a graduate level adult education course although they had inadequate background knowledge about the subject matter and limited English proficiency (as measured by TOEFL tests). Their results reveal that the instructor (expert) structured course interactions and assignments which allowed the students

(novices) to participate in the interaction and undertake assignments that may otherwise have been beyond their apparent L2 capabilities.

A third proposed benefit of cooperative learning in SLA is that it promotes positive attitudes among language learners. Gunderson and Johnson (1980) in the first L2 study on cooperative learning concluded that:

Perhaps the most basic instructional objective in a foreign language class is to send students away with at least as favorable an attitude toward learning the language as they had when they first arrived in the classroom. Certainly, students who finish one foreign language course should wish to take the second. While competitive and individualistic learning groups do have their place, the use of cooperative learning is an important teaching strategy for promoting positive attitudes toward learning a foreign language. (p. 43)

It has been suggested that cooperative learning methods in language learning increases students' willingness to learn for several social and psychological reasons. When students work together in groups, they are less intimidated when they perceive that other group members struggle as hard as they do to generate a sentence or words to make themselves understood (Dörnyei, 1997; Gwyn, Paquette & Tochon, 2003). Another reason cooperative learning is thought to reduce stress and anxiety is that it contributes to the development of "linguistic self-confidence" (Dörnyei, 1997). Dörnyei attributes this effect to the "positive emotional tone" promoted by the increased peer acceptance and support characteristic of cooperative learning as well as to the "increased level of self-determination" (p. 490). Students who fear making mistakes in front of a large group overcome their reluctance to use the L2 if they work in small groups with whom they have built a trusting relationship (Oxford & Anderson, 1995). Szostek (1994) found that group members feel a great deal of satisfaction in an L2 context when they helped each other to learn by coaching, teaching, and drilling each other. Students in a cooperative learning environment have an opportunity to have enhanced self-confidence and

cooperative learning seems to have a consistently favorable emotional impact on ELL's attitudes and motivation.

However, not all of the research concerning the use of cooperative learning with ELLs is positive. Liang (2004) found that Chinese students learning English in Canada did not always work cooperatively in class. She found that 71% of the students interviewed in her study liked and disliked working in groups simultaneously. The students faced several dilemmas in which contradictory values were held by the students. The first dilemma was choosing between helping one another in groups versus demonstrating individual ability to the teacher. The second dilemma was whether they should share ideas with group members or keep them to themselves to get better marks on assessments. The third dilemma was how much effort they should put forth in their group work when they realize that the educational system, in general, is based on quantifying individual academic achievement. Her study suggests that Chinese ESL students are very conflicted about collectivism and individualism as well as cooperation versus competition in the classroom.

In a study on ESL students' learning style preferences, Reid (1987) reported that virtually none of her 1,388 participants from nine different language backgrounds chose group learning as a major learning preference. Individualized learning was preferred by all of the groups with English speakers giving it the highest rating. In fact, many students indicated that group learning was actually a highly negative format for them.

Other reports on ESL students' negative attitudes toward cooperative learning have been published. In a description of her students' reaction to working cooperatively in the classroom, Kinsella (1996) reports:

Despite the merits of pairing and grouping strategies, my varied high school and university teaching experiences with the linguistically and culturally diverse student population of San Francisco have made me very aware that not all ESL students embrace collaborative classroom learning with the same zeal as do their instructors. In fact, some immigrant ... students are more likely to react with raised eyebrows and sighs at the prospect of a semester of ongoing participation in peer working groups. In my own classes and those of colleagues, I have observed that well-intended instructional efforts to create more democratic and varied contexts for second language use and growth can be met with reluctance and disorientation on the part of some ESL students. (p.24)

Students' preferences for individualistic learning does not necessarily mean that cooperative learning is disadvantageous. It does mean, however, that ESOL teachers need to understand what challenges come with implementing cooperative learning in their classrooms. They should also be cognizant of the fact that most students do not behave cooperatively in the classroom and that cooperative learning may go against their preferred personal learning styles. It is also important to note that regardless of the fact that researchers and teachers feel cooperative learning is superior to individual and competitive learning, a student-centered approach to education requires keeping students' preferences and needs in mind while planning instruction.

Individual Differences

From the very beginning of the field of psychology, it has had two somewhat contradictory objectives. On one hand, to explore the general principles of the human mind, and on the other hand to explore the uniqueness of the individual psyche (Dörnyei, 2005). The second objective has led to the sub-discipline of individual differences (ID) research which concerns itself with understanding what characteristics make individuals dissimilar to each other and exploring how and why such differences occur (inter-individual variation). This tension between general principles and idiosyncratic principles is also at play in second language

research. Unlike first language acquisition, second language acquisition is much less predictable and in large part this is thought to be the result of ID. Individual differences have been shown to be very consistent predictors of language learning success in instructional settings with multiple correlation studies yielding ranges of 0.50 and above (Dörnyei & Skehan, 2003; Sawyer & Ranta, 2001).

Historic overview. Trying to understand ID is as old as mankind. The origins of modern ID research, though, can be traced back to Sir Francis Galton. He is usually credited with doing the first scientifically based research on ID and developed both methods to collect data as well as statistical techniques for data analysis. Binet and Simon created the first intelligence test in 1905, and since that time, intelligence testing and research have been the driving force behind the study of IDs. Since the beginning of modern education, the importance of IDs has been recognized in the field of education. Educational psychology has informed instruction and given insight into the strengths, weaknesses, and preferences of learners (Dörnyei & Ryan, 2015). Humans differ from each other due to various biological or conditioned factors (affected by nature) or unconscious forces (affected by past experiences). The differences that one can explore are age, sex, aptitude, motivation, learning styles, learning strategies, and personality (Zafar & Meenakshi, 2012). The above-mentioned differences are interlaced with one another and together they play important roles in language learning. In L2 research, learner characteristics have been investigated for many years. The first studies were primarily aimed at what makes a good language learner. Language aptitude was concerned with the cognitive dimensions of SLA. Learning styles focused on how one preferred to learn a language. Learning strategies were partly made up of motivation and partly learning styles (Dörnyei & Ryan, 2015). According to McAdams (2006), personality is made up of three tiers. At the first

tier, there are the dispositional traits which are fairly stable and decontextualized. These include the traits of extraversion, friendliness, dutifulness, depressiveness, and neuroticism. The next tier of the framework is characteristic adaptations. These constructs are highly contextualized and include such things as motives, goals, plans, strategies, values, schemas, self-images, and many other aspects of individuality. The final part of the framework is integrative life narratives which are highly personal, organizational frameworks that help humans make sense of their lives and place in the world. They give people a purpose or meaning for life. McAdam's framework is a departure from what has been known as the Big 5 model which consists of five basic personality components (extraversion, neuroticism, openness, conscientiousness, and agreeableness) and built upon Eysenck's three factor model of personality. The original dimensions were extraversion versus introversion and neuroticism emotionally versus emotional stability. People who had high extraversion scores are described as sociable, active, gregarious, passionate, talkative, and assertive, whereas individuals who have low extraversion scores are described as passive, quiet, reserved, withdrawn, sober, aloof, and restrained. People who scored highly on neuroticism are seen as the type of people who worry and feel anxious, insecure, depressed, self-conscious, moody, emotional, and unstable. This is contrasted by emotionally stable people who are seen as calm, relaxed, unemotional, hardy, comfortable, content, even tempered, and self-satisfied. People with high openness to experience scores are thought to be imaginative, curious, flexible, creative, untraditional, and moved by art. Low scorers are seen as conservative, conventional, down-to-earth, and practical. If a person scores high on conscientiousness, they are believed to be systematic, meticulous, efficient, organized, reliable, responsible, hard-working, and self-disciplined. Those who score on the lower end are described as unreliable, careless, disorganized, lazy, negligent, and weak-willed. Finally,

those who have high agreeableness scores are considered good-natured, friendly, likable, kind, forgiving, cooperative, trusting, modest, and generous. Those whose scores are low on agreeableness are cold, cynical, rude, unpleasant, critical, antagonistic, suspicious, vengeful, irritable, and uncooperative. Clearly the scales are skewed towards high scores being more favorable. However, extensive empirical studies have tested the model and found it to be a good representation of personality (Dörnyei & Ryan, 2015).

The personality dimension of extraversion-introversion (E/I) has been the most researched personality aspect in L2 studies (Dörnyei & Ryan, 2015). From a biological point of view, E/I is related to the arousal levels in the autonomous nervous system and in the cortex (Eysenck, 1981). Extraverts are under aroused, and as such, they look for external stimulation to reach a moderate and optimal level of cortical arousal. For introverts the opposite is thought to be true. Their nervous system is over aroused and thus they avoid situations that will increase external stimulation (Dewaele & Furnham, 1999).

Biological factors affecting extraversion/introversion. What causes this arousal in the brains of extraverts is believed to be the neurotransmitter dopamine which is most closely related to movement, attention, alert states, and learning (Laney, 2002). Granneman (2015) explains,

Dopamine is a chemical released in the brain that provides the motivation to seek external rewards like earning money, climbing the social ladder, attracting a mate, or getting selected for a high-profile project at work. When dopamine floods the brain, both introverts and extraverts become more talkative, alert to their surroundings, and motivated to take risks and explore the environment. (para. 3)

Introverts and extraverts have the same levels of dopamine present in their brains, however their dopamine reward networks differ. It is thought that this is related to D4DR gene. Extraverts are thought to have long D4DR genes which makes them less sensitive to dopamine,

and therefore need to experience more external stimuli (novelty) to produce higher levels of dopamine (Laney, 2002). This increase of dopamine energizes the extravert and builds their sense that they are on their way to achieving their goals (Granneman, 2015). Introverts are thought to have short D4DR genes which are highly sensitive to dopamine (Laney, 2002). They receive sufficient dopamine doing quiet activities and therefore are not inclined to seek out as much novelty as extraverts. Extraverts tend to favor the sympathetic side of the nervous system which is responsible for the “fight or flight” response. The sympathetic nervous system helps the brain to become alert and hyper focused on the environment. It also releases blood sugar and free fatty acids which helps to elevate the body’s energy levels (Gunnerson, 2015).

Introverts have a preference for a different neurotransmitter linked to pleasure called acetylcholine. Acetylcholine triggers a person to turn inward and helps people to think deeply, reflect, and focus intensely on a topic for a long period of time (Granneman, 2015). It is also connected to utilization of long term memory and sleep and dream states (Laney, 2002). Acetylcholine is linked to the parasympathetic side of the nervous system. The parasympathetic nervous system helps our bodies conserve energy, relax muscles, lower heart rate, metabolize food, and lower blood pressure. It is what prepares us for rest and sleep (Gunnerson, 2015)

Effects of extraversion/ introversion on language learning. One of the first studies on the relationship between extraversion and learning was carried out by Eysenck who hypothesized that extraversion was not positively correlated with learning. As discussed earlier, he felt that due to several neurochemical phenomena in the human brain an introvert and not an extravert would be a better language learner (Zafer & Meenakshi, 2012).

Not all SLA theorists agree with Eysenck’s conclusion. Krashen (1985) hypothesized that extraverted L2 learners would be able to increase the amount of input they received in the

L2 and thus learn it more rapidly. Cook (2001) felt that the communicative approach would also favor extraverts who are more likely to engage in oral communication. McDonough (1986) thought extraverts would have an advantage in L2 classes because they would be more likely to join and participate in group activities. Swain (1985) gave the advantage to extraverts because they were more likely to maximize their language output and as such get corrective feedback. MacIntyre and Charos (1996) posited that language learning based on communicative techniques might favor extraverts. In addition to the theorists, many classroom teachers also believe that extraverts are more likely to be successful in learning an L2 because of their superior communicative abilities (Lightbown & Spada, 2006). Barron-Hauwaert (2010) found in interviews with parents of children who were learning an L2 that they, too, felt that extraversion would be advantageous for their children, as it would give them more opportunities to practice the L2. With this being said, extraversion is generally assumed to correlate with successful L2 learning in informal contexts, but this has not been supported by extensive research.

To date the actual research on E/I in SLA does not allow for any conclusions to be drawn about which end of the E/I spectrum is better. The answer may very well depend on the specific context. According to Ellis (2008), the aims of the learner may determine whether extraversion or introversion is advantageous,

“...extroversion is viewed as a factor having a positive effect on the development of L2 basic interpersonal skills, as extroverted learners are likely to interact more and more easily with other speakers of the L2. However, introspective learners may also experience an advantage: they may find it easier to study the L2 and thereby develop higher levels of cognitive academic language proficiency.” (p.541)

This point is supported by Dewaele and Furnham (2000) who argue that linguistic variables taken from complex verbal tasks (i.e. conversations) correlated to higher scores for

extraverts. They make the claim that extraverts have been found to be more fluent in L1 and L2 especially in formal situations and situations that lead to psychological stress. Ellis is also supported by Ehrman (2008) who after reviewing 4000 cases found that the L2 learners who reach the most advanced levels of acquisition typically were introverted, intuitive, logical, and precise. Skehan (1989) points out that introversion is usually a more desirable trait for academic achievement in general. Therefore, he argues that in formal language learning settings, language learning emphasizing memory for vocabulary and grammatical rules might favor the introverted learners. Robinson, Gabriel, and Katchan (1994) found as Ellis suggested that extraverts performed better on speaking assessments, but more introverted students performed better on grammar and vocabulary assessments.

In the next section, a review of research relevant to E/I and language learning is presented. It has been arranged by first presenting studies that have shown an advantage for extraverts, followed by studies that have shown an advantage for introverts, and finally studies that were not able to find correlations.

Dewaele and Furnham (2000) conducted a study with twenty-five Flemish university students to test the speech production of second language learners in order to investigate a possible correlation between personality style and oral fluency and accuracy. The students participated in conversations in interpersonal stressful and neutral situations. The interpersonal stressful situation consisted of an oral exam of about ten minutes. The neutral situation involved conversations between the same researcher and participants in a relaxed atmosphere. It was found that extraverted students achieved greater fluency in oral production tasks. They also found a significant relationship between extraversion and speech rates in both formal and informal situations. Chastain (1975) studied college students taking beginning French, German,

and Spanish classes. His analysis revealed that an outgoing personality (extraversion) had a positive correlation with final grades of the students in German class ($r=.30, p<.05$) and in Spanish class ($r=.34, p<.01$). Interestingly, there was no correlation between the two variables for French learners. Rossier (1975) studied the oral production of high school ESL students who had been living in the United States for three to six years and who spoke Spanish as an L1. The students were given the Eysenck Personality Inventory (EPQ) to determine their levels of E/I and an oral language production assessment that was rated by three people. He found a positive correlation between extraversion and oral English fluency.

Strong (1983) also found a significant relationship between extraversion and oral proficiency in spoken English. In his study, the 13 elementary school ESOL students were observed over the period of a year and assessed on the social factors of talkativeness, agreeableness, and responsiveness. He concluded that the children who were more sociable tended to be more efficient in English due to their active use of input.

Robinson et al. (1994) investigated the effect of personality on SLA for forty-five English speaking students studying French in Australia. They used the EPQ, a written grammar and vocabulary assessment, and an oral performance assessment to do a correlation study. They found that a positive correlation between extraversion scores and oral assessment scores. However, student with low extraversion (introversion) scores performed better on the grammar and vocabulary assessment.

Brown, Robson, and Rosenkjar (2001) studied the traits of personality, motivation, anxiety, strategies, and overall English proficiency and their effects on 320 Japanese university students taking part in an intensive language program in Japan. The students were given the Yatabe-Guilford personality assessment, a cloze test, and multiple choice grammar test. It was

found that students with high extraversion scores also did well when they used social strategies such as learning with others.

Hassan (2001) studied the relationship between E/I and accuracy in pronunciation. The study included seventy-one Arabic speakers learning English at an Egyptian university. He found a significant positive correlation between extraversion and English pronunciation accuracy ($r=.25$, $p<.05$). The researcher concluded that extraverts were more accurate as a result of being more fluent and initiating interactions while in class.

Oya, Manalo, and Greenwood (2004) investigated the relationship between personality and anxiety characteristics of Japanese students and their oral performance in English. The participants were seventy-three native-speakers of Japanese who were studying English at various language schools in New Zealand. They were administered the Maudsley Personality Inventory, the Spielberger State Anxiety Inventory, and a story-retelling task which was scored in terms of oral fluency, accuracy, complexity, and global impression. Significant correlations were found between extraversion and global impression scores which were an assessment of each speaker's overall oral performance as judged by the interviewers.

There is also some evidence that introversion leads to greater improvement in SLA. The following studies seem to indicate that introversion has a positive correlation with SLA. Altunel (2015) examined the impact that E/I had in learning English in Turkey at a state university using input-based instruction. The study included fifty-six students who were at the beginner to elementary levels. The students' proficiency in English was measured by the Oxford Online Placement test and they were given the Turkish version of the MBTI. They found that while both the introverts and extraverts improved while receiving input-based, L2 instruction, the introverts showed greater improvement in this setting. The students identified as introverts also

showed more improvement on both the grammar and listening assessments than did their extraverted counterparts.

Busch (1982) also examined pronunciation. She investigated the relationship between extraversion and the English proficiency scores of Japanese students learning English. She found a weak negative correlation between extraversion and the grammar/vocabulary section ($r = -.18, p < .057$) and reading section ($r = -.16, p < .069$) of the exam. However, she found a significant negative correlation between extraversion and pronunciation ($r = -.38, p < .009$). In this case introversion was a better predictor of pronunciation abilities than extraversion.

This was also the case with Tehrani, Guilan, Vahdany, and Arjmandi (2014). The researchers found that the pronunciation scores of the introverted students were better than the pronunciation scores of their extraverted counterparts. The study had 30 Iranian students learning EFL in their country. The instruments for the study were the EPQ, the Oxford Online Placement Test and the International English Language Testing Systems (IELTS) formatted oral interview.

Carrel, Prince, and Astika (1996) studied the academic performance of seventy-six Indonesian college students studying English and their personalities as measured using the Myers-Briggs Type Indicator. Overall, no relationship was found between personality types and language performance, however a negative correlation occurred between vocabulary performance and extraversion.

Alavinia and Sameei (2012) investigated extraversion and the listening abilities of 120 intermediate level Iranians learning English in a private language institute. They used the EPQ to determine the students' levels of extraversion and the listening portion of the Test of English as a Foreign Language (TOEFL) test preparation kit in which the students were required to

discuss what they had listened to on the test. The researchers found that introverted subjects performed better on the listening assessment compared to the extraverted subjects ($r=.718$, $p<.00$).

Finally, several studies have found no correlation between E/I and SLA. Suter (1976) investigated personality using the EPQ and accuracy in pronunciation in a university, ESL context. There were sixty-one participants in his study and they came from four different language groups Arabic, Japanese, Farsi, and Thai. The participants were recorded and then fourteen native speakers judged the students' accuracy in pronunciation. The researcher found that neither extraverts nor introverts scored significantly better on the pronunciation measure.

Naiman et al. (1996) followed the work of Joan Rubin and attempted to identify predictors of success in L2 by looking at ten traits of "the good language learner" including personality, attitude, and cognitive styles. He recruited seventy-two high school students studying French and gave them the Eysenck Personality Inventory (EPI) and the International Test of Education. The study examined criterion measures related to the written language, and no significant relationship was found between extraversion and written language.

Ehrman and Oxford (1995) investigated the correlation between personality types (using the MBTI) and both reading as well as oral language proficiency. The participants included 481 students studying languages at the U. S. State Department's Foreign Service Institute. The researchers found that E/I had almost no relationship to learning an L2. However, they did find a slight advantage for introversion over extraversion in reading. This study will be reviewed more closely in the next section.

Wakamoto (2007) recruited 148 second year EFL students from a women's college in Japan. The participants were given the MBTI, the Strategic Inventory for Language Learners,

and the listening portions of the Test of English for International Communication and the Comprehensive English Language Test. The subjects were also holistically evaluated by the English instructors on their oral communication in class. The results of the relationship between E/I and listening proficiency showed no significant correlations.

Sharp (2009) conducted a study in Hong Kong with 100 Chinese undergraduates. He examined the personality differences (using the MBTI), learner strategies (using the Strategy Inventory for Language Learning), and a standardized English Language test that measured grammar and reading proficiency. The study found that there was a slightly higher score in favor of introverted students, however it was not statistically significant.

Chen (2013) investigated the relationship between E/I (using the MBTI), foreign language anxiety (using the Foreign Language Classroom Anxiety Scale) and oral communication performance. Ninety-nine freshmen, English majors from a Taiwanese college took part in the study. The study found that there was no significant correlation between extraversion or introversion and the scores on the oral proficiency exam.

The research literature is inconclusive on the role of extraversion and introversion in language learning (see Table 1). A clear pattern has not emerged on which aspects of SLA can be correlated to E/I. Likewise, it is also difficult to pin down what the influence of culture and E/I has on L2 learners in formal educational settings. These discrepancies may be a result of different teaching and evaluation methods being used and/or dissimilar learning environments both in terms of learning and testing (Carrell et al., 1996). Daele et al. (2006) believes that the various research methods used in these studies may also contribute to the difficulty in drawing conclusions based on the data.

Table 1:

Summary of Extraversion/Introversion and Language Learning

Study	Correlation Favored	Language Aspect(s)	Setting for Study	Language (s) Spoken by Learners
Chastain (1975)	Extraversion	Listening, Speaking, Reading, Writing	Canada	English
Rossier (1975)	Extraversion	Speaking	USA	Spanish
Strong (1983)	Extraversion	Speaking	USA	Spanish
Robinson et al. (1994)	Extraversion	Speaking	Australia	English
Brown et al. (1996)	Extraversion	Speaking	Japan	Japanese
Hassan (2001)	Extraversion	Pronunciation	Egypt	Arabic
Dewaele & Furnham (2000)	Extraversion	Speaking	Belgium	Flemish
Vogel & Vogel (1986)	Extraversion	Speaking	Germany	German
Oh (2004)	Extraversion	Speaking	New Zealand	Japanese
Bush (1976)	Introversion	Pronunciation	USA	Japanese
Robinson et al. (1994)	Introversion	Grammar Vocabulary	Australia	English
Carrel et al. (1996)	Introversion	Vocabulary	Indonesia	Indonesian
Alavina & Sameei (2012)	Introversion	Listening	Iran	Farsi
Tehrani et al. (2104)	Introversion	Pronunciation	Iran	Farsi
Altunel (2015)	Introversion	Grammar Listening	Turkey	Turkish
Suter (1976)	Inconclusive	Pronunciation	USA	Arabic, Japanese, Farsi, Thai
Naiman et al. (1996)	Inconclusive	Writing	Canada	English
Ehrman & Oxford (1995)	Inconclusive	Speaking & Reading	USA	English
Wakamoto (2007)	Inconclusive	Listening	Japan	Japanese
Sharp (2009)	Inconclusive	Grammar, Reading	Hong Kong	Chinese
Chen (2013)	Inconclusive	Speaking	Taiwan	Chinese

Second Language Acquisition and Second Language Learning

There are a host of theories related to second language (L2) acquisition. Some theories have focused primarily on the importance of natural input in L2 development, others have focused primarily on the necessity of consciousness-raising (i.e. noticing) in acquiring an L2, while others emphasize the dynamic nature of language interactions between learners, their fellow students, their teachers, and others with whom they interact. This section will review

studies which relate to these particular theoretical groups but begins with a definition of what is meant by a language's grammar.

Fromkin, Rodman, and Hyams (2010) defined a grammar of a language as the knowledge speakers have about the units and rules of their language. Any language's grammar has several components: phonology, morphology, syntax, and semantics. Phonology is the set of rules for combining sounds into words. Next, morphology is the set of rules used in the formation of words. Syntax is the set of rules for combining words into phrases and phrases into sentences. Lastly, semantics is the set of rules used in assigning meaning. Grammar is sometimes thought of as a set of rules for a language that humans know and use at an unconscious level. It has been argued that the mind has the innate ability to construct language rules which allow human beings to understand and produce sentences that they have never heard or read before and also to judge whether a group of words form a sentence (Diaz-Rico, 2010). Chomsky refers to this genetically endowed language-specific knowledge as Universal Grammar (Chomsky, 1965). L2 teachers have attempted to help their students develop their language abilities and grammatical knowledge and practice using a variety of methods based on numerous theories of SLA. The following section examines three different theoretical approaches related to language acquisition.

Natural input.. According to Krashen (1985, p. 61), comprehensible input “is the only true cause of second language acquisition.” This assertion was the center point for Krashen's “Input Hypothesis” which is one of the more controversial theoretical perspectives in SLA research and is one part of a wide-ranging SLA theory made up of five interrelated hypotheses he developed over the years (1976, 1981, 1982, 1984, 1985, 1988, 1992, 1997, 2002, and 2003). In addition to the Input hypothesis (1981), it includes the Acquisition-Learning hypothesis (1982), the Monitor hypothesis (1981), the Natural Order hypothesis (1982), and the Affective Filter

hypothesis (1984). The following section will look at two of these hypotheses, the Acquisition-Learning and the Input hypotheses as well as their criticisms. The Acquisition-Learning hypothesis claims that adult learners have two means of internalizing the target language. One is by acquiring language through a subconscious and intuitive process that is not unlike the way children learn their first language (Krashen, 1985). In other words, acquisition occurs as a part of natural communication where people are unaware that they are “picking up” (2003, p. 1) the language. The second means is by learning an L2 with a conscious focus on the structures, rule formation, and the learning process in general (Brown, 2007). Krashen goes on to argue fluency depends on acquisition not learning stating that, “fluency in second language performance is due to what we have acquired, not to what we have learned” (1981, p. 99). In other words, adult learners sacrifice fluency in an L2 if they spend too much time learning rules and paying conscious attention to form. Krashen (1982) also claims that acquisition and learning are at odds and mutually exclusive, i.e. learning cannot become acquisition so that conscious learning is “very limited” (2003, p.1) and “peripheral” (2002, p. 213) in helping to develop a person’s L2 abilities.

Krashen’s Acquisition-Learning hypotheses might have some intuitive appeal to teachers in the field, particularly those that want to use a communicative approach to language teaching. After all, it is difficult to argue that having students engage in unmonitored meaningful communication is of no practical use. However, the acquisition-learning distinction has met with considerable criticism. McLaughlin (1987, 1990) has taken issue with a lack of clarity between subconscious acquisition and conscious learning. “I believe these terms are too laden with surplus meaning and too difficult to define empirically to be useful theoretically” (McLaughlin, 1990, p. 627). Because it is difficult to identify the distinction between the subconscious and

conscious, it is in turn difficult to base language acquisition theory on such a notion. Since the acquisition-learning distinction is ambiguous at best, it cannot be empirically tested, and when a theory cannot be tested, it cannot be claimed as sound (McLaughlin, 1987). Subconscious and conscious learning may both occur and it is difficult to say that one should have precedence over the other in all situations.

Krashen's Input hypothesis attempts to explain how acquisition comes about (1985, 2002, 2003). He posits that a necessary "condition for language acquisition to occur is that the acquirer *understand* (via reading or hearing) input language that contains structures 'a bit beyond' his or her current level of competence... If an acquirer is at stage or level i , the input he or she understands should contain $i + 1$ " (Krashen, 1981). In other words, in order to develop in a second language, the learner must be exposed to input that is slightly beyond what they already comprehend, but not so far beyond that it cannot be understood. $i + 2$ or $i + 3$ would be of no use in developing L2 abilities and neither would $i + 0$ as it would not be challenging enough to spur growth. The input hypothesis seems to have some commonality with Vygotsky's Zone of Proximal Development. However, the zone of proximal development, as previously mentioned, relates social interaction and the importance of having others help one to learn what they cannot on their own. The ZPD relates to more than just language learning as it also accounts for the role of culture change, motivation in learning, and learner identity (Kington, 2001; Dunn & Lantolf, 1998)

Several researchers have done empirical studies to explore whether Krashen's suggestion that language teachers avoid teaching grammar overtly because there is no overlap between acquisition and learning (e.g. Swain, 1998; Doughty & Williams, 1998; Buczowska & Weist, 1991; Doughty, 1991; Ellis, 1993; Lightbown & Spada, 1990, 2000; Hammerley, 1987; Larsen-

Freeman, 2003). Collectively, these studies seem to contradict Krashen as they indicate that conscious rule learning and focusing on the form and structure of a language can help to build the learners abilities to communicate in an L2.

Hammerley (1987) reviewed six studies which looked at the use of the natural approach (based on the Input Hypothesis) and its lack of explicit grammar instruction in language immersion programs. While students in the studies acquired higher levels of receptive skills in the target language, the subjects did not fare as well in the productive skills and were found to be “far from linguistically competent” (Hammerley, 1987, p. 395). The findings seem to suggest that students in immersion programs may fossilize ungrammatical forms in their interlanguage which may limit their linguistic development in the L2. Higgs and Clifford (1982) argue that L2 learners who do not receive proper grammar instruction and who want to communicate freely in the L2 are “forced to adopt or invent communication strategies that lead to fossilization” (p. 78). It is thought that fossilization occurs when an error becomes a habit of speech within a learner’s interlanguage because the error has not been corrected.

Larsen-Freeman (2003) has drawn similar conclusions in her study of immersion students in Canada. Students who were given natural input without explicit instruction in grammar were not able to acquire basic production skills. The students continued to make the same basic morpho-syntactic mistakes even when they received copious amounts of comprehensible input.

Azar (2008) points out that although the naturalist movement in the 1980s and the 1990s propagated comprehensible input, many in the modern day academic community think that it is insufficient to develop advanced levels of L2 acquisition. Instead, Azar states that, “students in L2 programs that include both grammar teaching and communicative teaching show accelerated

learning and substantial gains in usage ability, compared to students in programs that provide only communicative exposure to target structures” (para. 16).

Consciousness raising.. In contrast to the input hypothesis, numerous researchers have argued that explicit instruction can enhance language acquisition and that practicing at a conscious level can lead to automaticity (e.g. Bialystok, 1978; Crookes, 1991; Schmidt, 1990, 1993, 1995). Schmidt (1990, 1993, 1995) claims that learners must consciously notice forms and meaning in the input they receive for it to eventually become intake for learning. Intake is the portion of the vast amount of input one receives that actually gets stored in long-term memory (Brown, 2007). Schmidt’s argument is that attention to input is essential for intake to take place and intake must be available for further cognitive processing. Schmidt (1990) did not distinguish between learners intentionally and unintentionally noticing a grammatical structure only that, “If noticed, it becomes intake” (p. 139). Ellis (1993) suggests that there are three possible results of a learner noticing something having to do with a language’s grammar. One possibility is the learner notices, construes, and instantly incorporates the new grammar feature into their interlanguage system. A second possibility is that while the learner notices, construes, and constructs an explicit representation of the feature he/she does not fully incorporate the new feature into their interlanguage. In other words, the learner knows what the feature is and how it works but he/she is not able to produce it with automaticity. Finally, a third possibility is the learner notices the grammar point, but it does not lead to its intake. In this case, the learner may have forgotten what was noticed, but by virtue of having noticed it, in the future the structure maybe more easily processed (p. 75).

Several researchers (e.g. De Graff, 1997a, 1997b; Long, 1983; Norris & Ortega, 2000, 2001) have investigated the effectiveness of explicit grammar instruction. They have concluded

that such instruction can have a beneficial effect on L2 learners. Long's (1983) review of eleven studies on explicit grammar instruction found six that show such instruction as more productive, two studies where the results were ambiguous, and three where the findings were null. Long concluded that explicit grammar instruction can have a positive effect on learners of different ages (i.e. children, adolescents, and adults), learners with different levels of language proficiency (i.e. beginning, intermediate, and advanced), on various types of tests (i.e. discrete-point and integrative tests), and in acquisition-rich and acquisition-poor environments.

Norris and Ortega (2001) reviewed seventy-seven experimental or quasi-experimental research studies published between 1980 and 1998. Forty-nine of these studies compared explicit grammar instruction with implicit grammar instruction. They found that explicit instruction in grammar was more effective than implicit instruction with an effect size of ($d = .75$). They also found that the effects of the grammar instruction appeared to be durable as delayed posttests effect sizes stayed relatively large.

De Graff (1997a, 1997b) studied the effect of explicit instruction on the acquisition of an artificial language and Spanish as a foreign language by speakers of Dutch. The results of the study indicated that explicit instruction facilitated the implicit knowledge of form and meaning of the languages studied in terms of complexity and accuracy. The findings of De Graff along with Long's (1983) and Norris and Ortega's (2001) research helped to validate Schmidt's (1990, 1993, 1995) noticing hypothesis, which argues that noticing is a necessary component for input to become intake.

Social constructivism. The preceding theories on natural input and consciousness-raising both focus primarily on individual learner's cognitive and innate language learning processes. Social constructivist researchers (e.g. Zuengler & Cole, 2005; Lantolf, 2005; Watson-

Gegeo & Nielsen, 2003; Siegel, 2003) emphasize the dynamic nature of the interplay between learners, their peers, their teachers, and other people with whom they interact. These ideas are in alignment with Vygotsky's theories of social constructivism previously discussed with regard to cooperative learning. Social constructivists assert that "cognitive structures are influenced and, indeed, developed through engagement in social activity... From this perspective, it can be said that language use forms cognition" (Firth & Wagner, 1998, p. 92). Long (1991, 1996) argues that comprehensible input is the result of modified interaction and that in and of itself comprehensible input is not sufficient to produce language acquisition. Native speakers and more advanced L2 speakers who attempt to communicate with L2 learners must make various modifications for input to be understood. According to Lee (2001), several strategies are used by interlocutors as they negotiate meaning include clarification requests, confirmation checks, and comprehension checks in order to have what they are expressing be comprehensible to the learner. Therefore, Long (1996) argues that it is not only input but also the interaction that leads to the process of acquisition. Long's assertion that conversation and other interactive communication could be the basis for developing linguistic rules is a radical departure from the view of the L2 classroom as a place to practice grammatical features (Brown, 2007).

In a similar vein, Gass and Varonis (1994) argue that "instances of nonunderstanding" are what prompt learners to recognize that they need to make linguistic modifications. Interactional modifications are necessary and can serve to focus learner's attention on potentially problematic areas of their discourse and open the doors to development in an L2 and the learners' interlanguage. In other words, the differences between the L2 forms and the target language becomes a catalyst for learning as forms that might have gone unnoticed are brought to the learners' attention through interaction.

There have been several studies that seem to support the link between interaction and acquisition (Mackey, 1999; Swain & Lapkin, 1998; Gass & Varonis, 1994; Pica, 1987). Mackey (1999), using a pretest, delayed posttest design with native speaking and nonnative speaking dyads carrying out communicative tasks, found a positive effect for negotiated interaction, but no effect for observing interaction without opportunities for production nor for receiving modified input without an opportunity for interaction when producing morphosyntactic forms.

Gass and Varonis (1994) investigated the effects of interaction and modified input on L2 production. In their study, 16 native speakers and nonnative speakers were paired and given a goal of completing an object placement task, with the participants alternating between describing where to place an object on a board and placing the objects on a separate board. The researchers found that both negotiated and modified input positively affected comprehension and that prior negotiated interaction but not prior modified interaction significantly affected production, measured by the ability to give directions. Gass and Varonis (1994) suggest that interaction with the opportunity for modifications may affect later language use.

Swain and Lapkin's (1998) study of eighth-grade students in French immersion classes engaged in a jigsaw task found that through discourse, linguistic knowledge is co-constructed by the interlocutors and that this represents ongoing learning. They believe that the mental processes of hypothesis generation, hypothesis testing, and the extension of knowledge make up dialogic communication which mediates actual learning.

The Interaction Hypothesis has placed greater focus on the language classroom as center for optimal input and interaction. The classroom is no longer seen as a place where learners with different backgrounds, differing abilities, and unique learning styles are each individually pursuing their own personal interests and understandings. It is now seen as a place where the

contexts for interaction need to be stimulating and carefully designed to help the students socially construct their language learning. Mackey (1999) points out that when learners struggle to communicate and attempt to both understand and to be understood in an L2, their attention is on language as well as meaning. This negotiated interaction, during which the learners' attention may be focused on form, may lead to the L2 learner noticing differences between their interlanguage grammar and the target language. Such negotiated interactions also may be advantageous to L2 acquisition because they occur exactly when the learner does not understand something and can signal that they need additional input for comprehension to take place. In a sense, it is customized input that fits precisely at their level of interlanguage.

There is some overlap between theories which emphasize natural input, consciousness-raising, and social constructivism in SLA and they should not be thought of as mutually exclusive. For instance, Schumann (1982) suggests that, "Krashen's and McLaughlin's views can coexist as ... reality symbolized in two different ways" (p.113). Each of these theoretical groups tries to establish what is fundamental about learning a language. For language learners and more importantly language teachers, each of the preceding theories and the studies related to them help to provide some guidance on what might be appropriate methods and activities for teaching in an L2 classroom.

Extraversion/Introversion, Cooperative Learning, and Language Learning

There have been a very limited number of studies looking at the interplay between personality factors of E/I, CL, and language learning. Ehrman (1989) is one of the few studies that touches upon these three areas although the group work was not set up to be cooperative. Ehrman's study focused on the relationship between language learning (Turkish and Japanese), human consciousness (measured using the MBTI) and a variety of cognitive, behavioral, and

affective factors influencing SLA of adults working in groups of two to six people studying at the U. S. State Department's Foreign Service Institute (FSI). The subjects not only were given the MBTI, but also had training and assistance in interpreting the results. She found that extraverted and introverted language learners used different strategies while working in the study groups to develop their language abilities. Extraverts had a preference for social interaction and had trouble working alone. They were able to ask their teachers for help and also interacted with native speakers who were not their teacher. It was found that they had a desire to communicate and thus wanted to know more sophisticated grammar earlier. The extraverts also lacked inhibition and talking seemed easy for them, and they were not afraid to try new ways of saying things even if they were incorrect. On the negative side, the extraverts found it hard to concentrate for long periods of time and sitting still for extended periods of time was also difficult. As might be expected, the introverts use very different learning strategies. They like to be self-sufficient and did a lot of their own analysis and structural hypothesis building. They liked written work and learned more from reading than they did from listening. They felt put on the spot when engaging in free conversation in their groups and exhausted by having to interact during their language training. The extraverts' talkativeness was distracting for them as well.

One very interesting aspect of this study, which is unusual, is that participants received training on the various personality types identified by the MBTI. It was found that the subjects were able to use this training to modify their interactions in class. The extraverts developed the skills of performing their own grammatical analysis, learned to read by themselves, and learned to free themselves from distractions and study in a concentrated manner. The introverts developed their abilities to take risks when speaking and get over their fear of making mistakes. They learned to interrupt class when appropriate in order to ask for help and they approached

others in order to get practice using Turkish including talking with people outside of their class. It is encouraging to think that the extraverts and introverts both consciously became more ambiverted in order to improve their language skills and enhance their development.

Ehrman's (1989) study points to the strong possibility that both extraversion and introversion can be beneficial to language learning depending on the social situation and the tasks the learner is being asked to perform as well as the learning strategies that they chose to employ. This study seems to indicate that group work can foster an environment where L2 learners, regardless of where they fall on the E/I spectrum, can succeed in learning.

Summary

This review the literature focused on both theoretical and empirical studies which examine cooperative learning in general and more specifically cooperative learning in English as a second language classes. Cooperative learning, based on research related to social interdependence, has been found to be effective in helping students learn in a variety of contexts including with secondary students and ELLs. In this review, the history, key components, two suggested approaches to cooperative learning, and both the challenges and promise of its use in educational and in particular ESL classes were presented.

This chapter has also reviewed the literature on one individual difference in language learning that being the personality trait of extraversion. Extraversion levels has been found to have a significant role in learning an L2. Biological factors that affect extraversion and introversion levels were discussed in order to have a better understanding of this trait as it pertains to language learning. Several studies were also reviewed which make a case for extraversion levels having an effect on SLA, although no clear advantage for either type of learner was established.

The third section of the chapter examined the role of natural input, consciousness raising, and social interaction in second language acquisition. The studies reviewed show that each of the three theories can help to explain some aspects of learning a second language, but none of them seem adequate to stand on their own. They do, however, offer some guidance on what should be taken into consideration when teaching a second language.

While there has been ongoing research on second language acquisition, cooperative learning, and E/I, until now, there has been very little empirical research carried out concerning the impact that E/I has on ESL students who have been assigned to work in cooperative groups. Such research might provide insights into ways to improve classroom instruction for ELLs in secondary school ESOL programs. This study attempted to help fill in this gap in our understanding by exploring ELLs' language development with regard to grammatical knowledge in an ESOL classroom in a Midwestern secondary school. As the first research project (to the researcher's knowledge) to investigate cooperative learning and E/I in this context, it is hoped that the results of this study will have implications for secondary school English teaching and learning in ESL classes, and SLA pedagogy in other similar EFL contexts.

The following chapter presents the methodology for this study and includes sections that address the research questions, hypotheses, design, participants, instruments, data collection, and analysis.

Chapter 3: Method and Procedures

The primary focus of this mixed-method study was to explore how the personality trait of extraversion influences the development of grammar skills for ESOL students who were taught in cooperative learning and whole-class groups. This chapter describes the methodology of this mixed methods study that consists of two parts: a quantitative portion and a qualitative portion. Part one, discusses the quantitative analysis of an extraversion questionnaire completed by the participants and an analysis of covariance of a pretest and posttest which used the Scantron Performance Series assessment for Language Arts (SPS-LA). Part two discusses the qualitative analysis of observations of students and a series of student interviews completed by the researcher of the case study subjects.

Mixed Methods Research

The methodology selected for this study was mixed methods which is grounded in pragmatic values; this methodology focuses on determining the meaning of words, concepts, ideas, statements, and beliefs. The main philosophical belief that underpins mixed methods research is the importance and usefulness of combining different methods to explore research questions. Mixed methods research combines elements of qualitative and quantitative data methods. Researchers who choose this method often determine that one or more of the following components exists: (a) one data source is insufficient, (b) multiple methods would provide a more comprehensive explanation of the results, (c) generalizability of the results is essential, (d) the study would benefit from a second method, (e) the theoretical perspective provides a need to gather qualitative and quantitative data, or (f) a dual-method approach through multiple phases increases reliability of results (Creswell & Plano-Clark, 2011). Researchers who utilize mixed

methods research designs attempt to enhance greater understanding through innovation and numerous modes of data collection (Johnson & Onwuegbuzie, 2004; Johnson, Onwuegbuzie, & Turner, 2007).

An increased level of understanding through the integration of qualitative and quantitative data is a primary element of mixed methods research. This method was selected in this case because it was believed that the study would benefit from multiple methods of data collection. It was anticipated that more comprehensive results could be achieved by the use of multiple methods and by not restricting the study to the use of only one method of data collection. Creswell and Plano-Clark (2011) admit a mixed methods approach is not suitable for every research question, however allowing researchers the freedom to use all methods possible to approach a problem, increases the rate at which studies are completed (Creswell & Plano-Clark, 2011; Johnson & Onwuegbuzie, 2004).

The research questions guiding this study were complex. They focused not only on quantitative data (test scores) but also on the perceptions of the research subjects concerning their learning. A mixed methods design was selected for this study for the following reasons. First, it was important to obtain reliability through the use of multiple data collection and analysis measures. Second, the subjects' views on cooperative learning and whole-class learning were essential to enhancing the validity of the study. And finally, it was hoped that a mixed methods design would enhance the generalizability of the qualitative findings.

Research Questions

1. Is there a difference in students' grammar proficiency development in ESOL classes employing small group cooperative learning activities versus whole-class instructional grouping?

2. How does student achievement differ between cooperative learning groups and whole-class instruction groups in relation to levels of extraversion?
3. How does a selected sample of students from secondary school ESOL classes describe their learning experiences in cooperative learning groups and in whole-class groups?

Research Hypotheses

1. It was hypothesized that when comparing two groups of English Language Learners who received instruction in English grammar in either a whole-class environment or in a small group cooperative learning environment, the cooperative learning group would show significantly greater improvement in grammatical accuracy as measured by the parts-of-speech section of the Scantron Performance Language Arts assessment from pretest to posttest.
2. It was hypothesized that the higher along the extraversion/introversion spectrum towards extraversion students identified, the greater said students' gains would be on the parts-of-speech section of the Scantron Performance Language Arts assessment when exposed to cooperative learning in small groups.
3. It was hypothesized that the higher along the extraversion/introversion spectrum towards extraversion students identified, the lower said students' gains would be on the parts-of-speech section of the Scantron Performance Language Arts assessment when exposed to whole-class instruction.

Design

For the first part of the quantitative portion of the study, a quasi-experimental pretest-posttest comparison group design was used to compare the cooperative learning group with the whole-class instruction group in terms of outcomes on the parts of speech section of the SPS-LA.

The quasi-experimental design was selected due to the availability of the subjects. When developing artificial groups is unfeasible and intact classes accessible, the quasi-experimental design appears to be a reasonable choice (Creswell, 2009). In this study, a quasi-independent variable was students' level of extraversion. However, for the second independent variable, classes were randomly assigned to either the treatment (i.e., cooperative learning) or the control group (i.e., instruction in a whole-class format). Within the classes selected for the treatment, students were assigned to particular cooperative learning groups based on three criteria: (a) current grades in their ESOL class, (b) level of extraversion, and (c) gender. The students had been placed into the high intermediate (ESOL 3) and advanced level (ESOL 4) English courses based on their Lexile reading scores, or placement test scores, or teacher recommendations. Each student in the high intermediate level had a Lexile reading score of 800 to 1000 at the beginning of the school year, and students in the advanced level had Lexile scores in reading above 1000 at the beginning of the year, as determined by the Scantron Performance Assessment which the students took in August. According to the Lexile Framework for Reading (n.d.) an 800 level Lexile Reading score is at approximately the 8th/9th grade level, and a 1000 level Lexile Reading score is at approximately the 9th/10th grade reading level. Students could also have placed into either level based on the recommendation of their previous year's ESOL teacher(s). For students new to the district, Ballard and Tighe IPT test scores were used to establish the students' placement in ESOL classes. None of the students who took part in the study had attained an overall passing score on the English Language Proficiency Assessment for the 21st Century (ELPA21) the previous year. The dependent measure was the students' gains from pretest to posttest on the SPS-LA parts-of-speech section. Across two courses, five groups were formed (Table 2).

Table 2:

Treatment and Control Group Assignments

Groups/Level	Pretest	Treatment	Posttest
A: ESOL 3	SPS-LA	Cooperative Learning	SPS-LA
B: ESOL 4	SPS-LA	Cooperative Learning	SPS-LA
C: ESOL 4	SPS-LA	Cooperative Learning	SPS-LA
D: ESOL 4	SPS-LA	Whole-class	SPS-LA
E: ESOL 3	SPS-LA	Whole-class	SPS-LA

The qualitative portion of the study investigated how students from the control group and students from the treatment group describe their learning experiences in either type of class. Eight students were selected based on their level of extraversion with four receiving instruction in cooperative groups and four receiving instruction in whole-class groups. The students were directly observed while working in their respective groups and field notes were taken on the participants' on-task behaviors, contribution of ideas, efforts to assist their classmates, and willingness to ask for help or clarification from their classmates. The students were interviewed twice (one-week prior the treatment and one week after the treatment) to elicit their opinions about learning in whole-class groups and small groups.

Context

The research was conducted at an urban, secondary school of about 900 students in the Midwest of the United States. The student body of the school was approximately 34% African American, 36% Latino/Hispanic, 20% White, and 10% mixed or other. The participants in this study were English Language Learners (ELLs). The students had been placed into the high intermediate and advanced level ESOL courses based on their reading scores, placement tests, or teacher recommendations. The study took place during weeks twelve through sixteen of the second semester of the school year, therefore the students were familiar with one another prior to

being assigned to their cooperative learning groups. The students were assigned to their small groups one week prior to the study being conducted.

The students were placed in their cooperative learning groups based on three criteria. The first criterion was their overall class grade at the start of the study. This grade included marks for homework, daily classroom work (such as worksheets, bell work, journals, and study guides), quizzes, exams, and projects. The small groups, wherever possible, were made up of a student with a high grade (85%-100%), a mid-high grade (75%-84%), a mid-low grade (60% to 74%), and a low grade (59% or below). The second criterion for group placement was the students' levels of extraversion as established by the JrEPQR-S. The mean score for extraversion for the all participants was 8. No groups were made up entirely of students who scored above 8 nor entirely of students who scored below 8. The final criterion for group placement was gender. Each group had an even number of male and female students with some groups made up of four females, others with four males, and others with two male and two female members.

Participants

For the quantitative portion of the study, a total of seventy-five students, enrolled in High Intermediate and Advanced level ESOL courses, were grouped into five different sections. High intermediate level students had Lexile scores of between 800 and 1000, and advanced level students had Lexile scores of over 1000 as determined by the Scantron Reading test. All of the participants were native speakers of Spanish with English being their second language. Spanish was also their home language. Most of the students were of Mexican descent with the exception of five students from Puerto Rico, one from Guatemala, and one from Argentina also being represented. The students ranged in age from fourteen to eighteen years with a mean age of 15.

There were thirty-five female students and forty male students who took part in the study. The mean grade level was 9.9 and distributed as follows: twenty-eight 9th graders, twenty-eight 10th graders, fifteen 11th graders, and four 12th graders. All of the students in the study qualify for free and reduced lunches through the federal government and are considered lower socioeconomic status (SES) students.

An a priori power analysis was conducted using G*Power 3.1.9 to determine the minimum sample size required to find significance with a desired level of power set at .80, an alpha (α) level at .05, and a moderate effect size of .20 (f^2). Based on the analysis, it was determined that a minimum of 33 participants were required to ensure adequate power for the multiple regression. The preliminary and primary analyses, in addition to the paired-samples t test, needed minimum sample sizes within the 33 participants (Cohen, 1988; Erdfelder, Faul, & Buchner, 1996; Faul, Erdfelder, Lang, & Buchner, 2007).

For the qualitative portion of the study, the sampling was purposive and eight students were selected as follows: one male and one female who scored high for extraversion with scores of 12 on the JrEPQR-s getting the cooperative learning treatment, one male and one female who scored low for extraversion with scores of 3 and 0 on the JrEPQR-s getting the cooperative learning treatment, two males who scored high for extraversion with scores of 11 and 9 on the JrEPQR-s in the control groups, and two females who scored low for extraversion with scores of 5 and 2 on the JrEPQR-s in the control group. All eight interviewees were English Language Learners (ELLs) (four women and four men) and were taking English for Speakers of Other Languages (ESOL) classes at the intermediate (ESOL 3) and advance levels (ESOL 4) at a high school in the Mid-Western United States. The participants' ages ranged from 14 to 18. They all had previous experience learning in cooperative learning groups and whole-class groups in their

school careers. The validity of the study was supported through the use of purposive sampling, outside observers, and pretreatment and posttreatment interviews. Table 3 provides more demographic details about the students selected for the qualitative portion of the study.

Table 3:
Participant Demographics

Name	Level of Extraversion (0-12)	Gender	Age	English Level (0-4)	Yrs. Of ESL Services	Grade	Grouping	Course Grade
Cindy	0	F	18	4	12	12	Cooperative	.74
Betsy	2	F	16	3	12	11	Whole-Class	.82
Don	3	M	14	3	10	9	Cooperative	.88
Alice	5	F	16	4	12	10	Whole-Class	1.00
Frank	9	M	15	3	11	10	Whole-Class	.68
Henry	11	M	15	4	12	10	Whole-Class	.95
Eddy	12	M	15	4	5	10	Cooperative	.94
Gina	12	F	15	3	4	10	Cooperative	.83

Research Instruments

This study employed both quantitative and qualitative measures. The two quantitative measures were The Junior Eysenck Personality Questionnaire Revised shortened version (JrEPQR-s) and the parts-of-speech section of the Scantron Performance Series Language Arts assessment (SPS-LA). The JrEPQR-s was used to place each participant on the extraversion spectrum (See Appendix A). The parts-of-speech section of the SPS-LA was used to determine the students' grammatical knowledge of the English language. The two qualitative measures were instructor observations and student interviews. The student interviews were conducted with the same subjects as the observations to explore how they describe their learning experiences in cooperative groups and whole-class groups.

Junior Revised Eysenck Personality Questionnaire. In order to determine and measure where the students fall on the E/I spectrum, the participants were given the Junior

Revised Eysenck Personality Questionnaire shortened versions (JrEPQR-s) developed by Corulla (1990). The original Junior Eysenck Personality Questionnaire has eighty-one items and in addition to items related to extraversion, it also contained questions related to neuroticism, psychoticism, and a lie scale (Eysenck & Eysenck, 1975). According to Kuo, Chih, Soong, Yang, and Chen (2004) and Roy (2012) the Junior Eysenck Personality Questionnaire has demonstrated that it has good cross-cultural reliability and validity. Kuo et al., (2004) listed many studies of adolescents that used the Junior Eysenck Personality Questionnaire including studies on substance abuse, depression, sleep disturbance, truancy, bullying, and conduct disorders. The Junior Eysenck Personality Questionnaire Revised (JrEPQR) (Eysenck, Eysenck, & Barrett, 1985) improved upon reliability, range of scoring, and skewed distribution. Corulla (1990) shortened the JrEPQR to contain 48 total items of which 12 measure extraversion. Francis (1996) reported that this shorten version known as the JrEPQR-s recorded satisfactory alpha coefficients for extraversion (0.69) neuroticism (0.71), psychoticism (0.58) and for the lie scale (0.65). The JrEPQR-s has 48 items in total and 12 for each section of the questionnaire. Respondents answered “yes” or “no” to each statement as it was presented. For the extraversion section of the questionnaire each “yes” response to items 1, 2, 3, 5, 6, 7, 8, 11, and 12 and each “no” response to items 4, 9, and 10 corresponded to a higher level of extraversion in personality type. For this study, only the extraversion section of the JrEPQR-s was used to make a judgement on the participants’ levels of extraversion.

Scantron Performance Series Language Arts Assessment. The parts-of-speech section of the SPS-LA was used to evaluate the students’ grammatical knowledge (See Appendix B). The SPS-LA followed a multiple-choice format and was web based and computer-adaptive. The test gave personalized results for each student. The adaptive nature of the test helped to

ensure that each student was adequately challenged by the questions they were asked without leading to frustration. Students received either a more complex or less complex question based on their response to the previous question. The SPS-LA also used a safeguard against students simply clicking answers as quickly as possible by stopping the test and labeling it spoiled if students answered too quickly. The SPS-LA was a criterion referenced assessment and was aligned with the Common Core and College and Career Readiness standards. The SPS-LA was intended to be a formative assessment with student, building, and district results possibly being used to inform instructional decisions at each level. The SPS-LA was norm referenced and students' scores could be compared to other students' scores at building, district, and national levels (Scantron Corporation, 2013). The SPS-LA was reviewed by bias editors who worked to ensure that items were unbiased and followed the Code of Professional Responsibilities in Education Measurement (1995). Scantron claimed that as a computer adaptive instrument if a student missed an item because he/she was culturally unfamiliar with any of the content of the question, the adaptive nature of the test could still zero in on the student's ability level, based on the student's performance on other items of equal or greater difficulty (Scantron, 2011, p. 8).

The SPS-LA used a probabilistic test model known as the Rasch model. Thus, the expectation was that all students at the same ability level had the same probability (less than 100%) of answering any given item. The reliability of the test may be questioned, but because it may be possible for a student to actually know things that were estimated to be above their current ability level the higher probability was that they did not. Because the SPS-LA was a computer adaptive test and students were exposed to different subsets of items, the most meaningful way to express its reliability was through the error associated each examinee's estimated ability also known as the standard error of measurement. The SPS-LA was found to

have a standard error of measurement of 0.30 logits for each examinee. This was roughly equivalent to a conventional reliability coefficient of 0.91 (Scantron, 2011, p. 66-69).

The content validity of the SPS-LA was addressed by item validity and sampling validity. The validity of the items on the SPS-LA was enhanced by following a rigorous process. All of the items on SPS-LA were developed by creating lists of skills through research of individual state standards, state assessment programs, and the standards proposed by the National Council of Teachers of English (NCTE). Each item developed for the item bank was written to measure a skill from the list at the appropriate grade level. An external panel of content area experts then reviewed each item for alignment to the indicated skill at the appropriate grade level, item content and quality, item bias, and gender count for passive/active voice. Items that failed this external review were eliminated from the item bank. To obtain a higher degree of sampling validity, the content areas were divided into sub-areas that function as testlets. Examinees were given items from many different testlets through the use of a selection algorithm developed by Scantron. To illustrate the concepts of item and sampling validity, Scantron examined the correlation for examinee scores between the component testlets and found a Pearson Correlation coefficient of 0.386 for the capitalization items, 0.866 for the parts-of-speech items, 0.864 for the punctuation items, and 0.891 for the sentence structure items (Scantron, 2011, p. 71-76).

Student observations. For one portion of the qualitative section of the study, the researcher directly observed the selected participants' behavior while working in cooperative groups and in whole-class groups. The researcher attempted to observe and record student behavior in four areas: on-task behavior, contribution of ideas, assisting classmates, and asking for help or clarification. These direct observations focused on the eight subjects selected for the study. Due to the dual duty of the researcher as both teacher and researcher, observation notes

were taken on an ad hoc basis. The notes were recorded on the observation form (See Appendix C) during instructional time whenever possible or immediately afterwards. Notes were taken a minimum of three occasions for each student during the study.

Student interviews. At the end of the treatment, semi-structured, face-to-face interviews were conducted with the same participants who were directly observed. Each participant was interviewed twice, once before the treatment and once afterwards, and each interview took approximately 10 minutes. The pre-treatment interview questions consisted of a total of seven questions (See Appendix D). The post-treatment interviews consisted of a total of twelve questions (See Appendix E). A guided semi-structured interview format was selected for both instruments as it allowed the researcher to collect the same general information from each respondent, while enabling the interviewer to remain flexible to probe further with follow-up questions while allowing for the participant to provide additional details, if needed. This allowed the researcher to follow the structure of the interview guide while also adapting the interview according to participants' responses (Turner, 2010). Interviews were recorded using a digital audio-recording device. Digital recordings allowed the researcher to refer back to the interviews as often as necessary to improve the accuracy of the transcriptions. The recordings also allowed the researcher to take a fresh look at the interview data over a period of months. The recordings were stored on two separate hard drives for security reasons.

Instruction

The participants received twenty, approximately forty-five minute lessons on a variety of English grammar rules collectively known as parts-of-speech (See Appendix F). The instruction took place over a five-week period just prior to the students taking the Scantron Performance series exams as required by the school district. The students in the treatment group were placed

in cooperative learning groups made up of three or four students which remained unchanged during the duration of the study. The students in the control group were not placed in small groups, but did have assigned seats that remained unchanged during the study and received whole-class instruction on the same parts-of-speech as the treatment group.

Adapted from Johnson, Johnson, and Smith's (2006) work, the basic format for the cooperative learning lessons had five steps. First, content and language objectives were set along with a group-processing objective. Group processing objectives included such things as taking turns, coming to consensus, offering help, giving reasons (see Appendix F for a complete list). Next, grouping decisions were made concerning the size of the groups, assignments and roles, room arrangement, and materials. At times, students worked with partners and other times they worked as a table group made up of 4 people. Then, procedures for positive interdependence, individual accountability, success criteria, and expected behaviors were identified. Step four focused on giving students feedback on their behavior while working in their groups during previous lessons. The final step in planning individual lessons was to evaluate the outcome of the lessons (See Appendix G for the Cooperative Learning Lesson Plan Form).

The format of each day's cooperative lesson was very similar. When the student arrived to class, they completed their bell work independently in their bell work notebooks. The bell work consisted of proofreading two or three sentences and correcting any grammatical errors they found. This usually took 5 to 10 minutes. Next, the students viewed a video presentation (typically 5 minutes or less in length) on the part-of-speech the lesson focused upon and about which they took notes using the Cornell method. Once the video presentation was complete, the students worked in their assigned groups to practice using the part-of-speech of the day. Prior to beginning their practice, the teacher explained the task and/or structure that would be used for

the lesson and also what the criteria were for its successful completion. Next, the students worked in teams to complete their assigned work. A variety of cooperative tasks were given to the students including such Kagan structures as fan-n-pick, numbered heads together, quiz-quiz-trade (for a complete list see Appendix F). An example of one of these activities was to have the students answer a question on the board related to the part-of-speech being studied that particular day. One student would be assigned the role of “scribe” and would write down the question. Together, as partners, they would formulate an answer which the scribe would record. Once the pairs answer was recorded, the student who was not the scribe would be assigned the role of “spokesperson” and share the teams answer with the rest of the groups and explain how the group arrived at their answer. Once each group had a chance to answer the question and explain their reasoning, the teacher would give the students the correct answer and explain why it was the most appropriate response. This is just one example to illustrate the type of practice the students were asked to do.

While the students were working cooperatively with their tablemates or partners, the researcher circulated throughout the room monitoring the groups, answering questions, checking for understanding, giving immediate feedback, and clarifying when needed, as well as intervening to help the groups stay on task. The researcher also took notes on the subjects’ behaviors for the qualitative portion of this study. Once the groups had finished the practice activities with their cooperative learning groups, each student took a formative assessment independently that was made up of 4 to 10 multiple choice questions using the same format as the SPS-LA assessment (See Appendix H for an example of this type of formative assessment).

A similar process was followed for the whole-class group. The students did the same bell work as the cooperative learning groups, and they took notes while watching the same a video

presentation on the lesson's part-of-speech. Once the presentation was complete, the teacher explained the practice task to the students and what the criteria were for its successful completion. Next, the students worked as a whole-class to complete the task (See Appendix F for a list of activities used). A variety of activities were employed including group discussions and games. An example of one of these activities was to have the students answer a question on the board related to the part-of-speech being studied that particular day. Student would be given some think time and then would write down their answers on their mini-whiteboards. Next, a student would be randomly selected to go to the board and share his/her answer. The class would then discuss whether or not they thought the student's answer was correct. Once the students had had a chance discuss what they thought the right answer might be and a consensus had been built, the teacher would give the students the correct answer and explain why it was the most appropriate response. This is just one example to illustrate the type of practice the students in the whole-class instructional groups were asked to perform.

While the students as a whole-class worked on the task, the teacher directed the lesson by providing constructive feedback and clarification as needed, intervening to help the class and individual students stay on task, and taking field notes on the students who were taking part in the qualitative portion of this study. Once the whole-class finished the day's practice activity each student took the same formative assessment that the students in the cooperative learning treatment groups were taking (see Appendix I for a sample whole-class lesson).

In an effort to increase the validity of the study, a pair of third-party, neutral observers conducted a total of five observations (See Appendix J). Two observations were conducted by the ELL coach for the district to verify that the teacher was working on parts-of-speech instruction and three observations by one of the district's cooperative learning coaches to verify

that the teacher was presenting lessons that adhered to the general principles of cooperative learning as outlined by Kagan (2009), including positive interdependence, individual accountability, equal opportunities to contribute (time or turns), and simultaneous interaction.

Teacher/Researcher

In the study, the teacher/researcher played multiple roles: teacher, observer, interviewer, and researcher. The teacher/researcher had taught English to speakers of other languages for twenty-five years and had worked as an ESOL teacher at the school at which the study took place for seven years. He held an M.A. in TESOL and had also successfully completed Kagan Cooperative Learning training and attended monthly cooperative learning workshops with a cooperative learning coach for three years.

Data Collection

For the quantitative portion of the study, the students took the SPS-LA during the fourth week of the semester. The students took the JrEPQR-s extraversion section in week eleven of the semester in order to determine where they fell on the E/I spectrum. The researcher randomly assigned classes to the control and treatment groups based on a roll of the dice. Three sections were included in the treatment group and two sections made up the control group.

For the qualitative portion of the study, the eight students were interviewed in week eleven of the semester and again in week seventeen. The interviews were semi-structured and face-to-face and took approximately 10 minutes. The interviews were recorded using a digital audio-recording device. The interviews focused on the participants' impressions of learning grammar in cooperative and whole-class formats.

Twenty language arts lessons were conducted (Table 4). The lessons focused six parts-of-speech: verbs, nouns, pronouns, adjectives, adverbs, and conjunctions. The control groups

practiced using the part-of-speech presented in the lesson in a whole-class format. The treatment group worked in cooperative learning groups to complete the practice activities.

Table 4:
Lesson Matrix

Lesson	Part of Speech	CL Strategy	Whole Group Strategy
1	VERB: Present Tense	Fan-N-Pick	Notetaking/Discussion
2	VERB: Present Progressive Tense	Round Table Consensus	Notetaking/Class Game
3	VERB: Present Perfect Tense	Numbered Heads Together	Notetaking/Discussion
4	PREPOSITIONS: Phrases	Inside-Outside Circles	Notetaking/Class Game
5	VERB: Past Tense	Showdown	Notetaking/Discussion
6	VERB: Irregular Verbs	Quiz-Quiz-Trade	Notetaking/Class Game
7	VERB: Past Progressive Tense	Think-Pair-Share	Notetaking/Discussion
8	VERB: Past Perfect Tense	Paired Heads Together	Notetaking/Class Game
9	VERB: Future Tense	Stand Up-Hand Up-Pair Up	Notetaking/Discussion
10	VERB: Future Perfect Tense	Odd One Out	Notetaking/Class Game
11	VERB: Helping Verbs	Fan-N-Pick	Notetaking/Discussion
12	CONJUNCTIONS: Coordinating	Showdown	Notetaking/Class Game
13	NOUN: Possessive	RoundTable Consensus	Notetaking/Discussion
14	ADJECTIVES&PRONOUN: Possessive	Think-Pair-Share	Notetaking/Class Game
15	PRONOUN: Subject & Object	Stand Up-Hand Up-Pair Up	Notetaking/Discussion
16	PRONOUNS: Relative	Numbered Heads Together	Notetaking/Class Game
17	PRONOUN: Indefinite	Mix-Freeze-Share	Notetaking/Discussion
18	ADVERBS: Common	Quiz-Quiz-Trade	Notetaking/Class Game
19	ADJECTIVES: Order	Paired Heads Together	Notetaking/Discussion
20	ADVERB/ADJECTIVES: Superlatives & Comparatives	All Write Round Robin	Notetaking/Class Game

The researcher received assistance from both the district secondary ELL coach and a cooperative learning coach. Both coaches reviewed the lesson plans and provided constructive

feedback on both the content and methods. The researcher observed the eight students who took part in the interviews and took field notes on their behavior during the lessons which focused on their perceived interest in the lessons, effort, and interactions with classmates.

During the week following the last lesson, the students retook the SPS-LA which served as the posttest. In week seventeen of the semester and once all of the students had completed the SPS-LA exam, the researcher conducted follow-up interviews with each of the eight students selected for the qualitative portion of the study. This second round of interviews focused on the students' perceptions of working in cooperative groups versus whole-class instruction and a guided semi-structured interview format was employed.

Quantitative Analyses

Descriptive statistics were calculated for all variables, comprising means, standard deviations, medians, minimum and maximum values for continuous variables (e.g., pre- and posttest SPS-LA scores), and frequencies and percentages were calculated for categorical demographic variables (e.g., gender, age). Distributions of the continuous variables were examined to determine if normality assumptions (including testing for outliers) were met and if parametric testing was complete. The data was analyzed using SPSS 24.0. An alpha (α) level of .05 was used to determine significance levels.

The first research question asks if there is an effect on students' grammar proficiency in ESOL classes employing small group cooperative learning practice activities versus whole-class instruction and practice activities. To answer this research question, an independent samples t-tests was conducted to compare the cooperative learning and whole-class groups SPS-LA parts-of-speech scores on the posttest. The purpose of the second research question was to examine if ESOL students' levels of extraversion influence their grammar proficiency development while

studying in a small group cooperative learning environment versus studying in a whole-class environment. To attempt to answer this question, a multiple linear regression was used to determine if the independent variables of treatment group and level of extraversion might help to explain the results of the dependent variable of students' posttest SPS-LA scores. To answer this research question, a multiple linear regression was conducted on students' posttest SPS-LA scores. The predictors in the model were group (treatment vs. control), extraversion scores (as measured by the JrEPQR-s), the interaction of group extraversion scores, and students' pretest SPS-LA scores. The groups were dummy coded as 1 = treatment and 0 = control. To create the interaction term, JrEPQR-s scores were mean-centered prior to multiplying scores with the dummy-coded variable for group.

Qualitative Analyses

The aim of this qualitative piece of the study was to derive general meaning from individual descriptions to determine the essence of the experience for these high school English Language Learners. The researcher attempted to identify primary themes related to learning in cooperative groups and whole-class groups. Audio recordings of interview data were transcribed verbatim by the teacher researcher. This transcribed data was reviewed, processed, and organized into codes, and ultimately into major emergent themes that assisted in answering the third research question of the study.

The analysis presented in the qualitative section of the study represents the process of sorting and categorizing information into smaller chunks of information which could then be analyzed into themes through inductive reasoning (Leedy & Ormrod, 2010). Field notes were written by hand and qualitatively coded and analyzed. These notes also informed the coding and analysis processing of the interview data. The data was analyzed deductively and triangulated

with various sources of data (interviews and observations) to generate understandings based on the students' perceptions regarding cooperative learning and whole-class grouping techniques in grammar instruction. Open coding was used for the data analysis and involved reviewing the frequency of positive and negative responses related to each interview item and making deductive and inductive inferences (Leech & Onwuegbuzie, 2008) based on matching patterns and responses. Student responses were transcribed verbatim. The subjects were given pseudonyms to protect their identities. By comparing and contrasting the participants' experiences and opinions, the researcher found a number of different perspectives about learning in cooperative groups and whole-class groups and about grammar instruction. Each comment presented equal research value, which encouraged frank interactions between the researcher and the participants.

Summary

The goal of this mixed-methods study was to explore if ESOL students being taught in cooperative learning groups and whole-class groups were able to develop their grammatical knowledge and improve their score on the SPA-LA, and what role, if any, the trait of extraversion might play in their learning. To increase the reliability, validity, and generalizability of the study, a mixed methods protocol consisting of both quantitative and qualitative measures was selected. The quantitative portion included an analysis of the JrEPQR-s extraversion questionnaire and the parts-of-speech section of the SPA-LA. The qualitative portion of the study analyzed observations of students while participating in the treatment and pre-treatment and post-treatment student interviews in an effort to gain insight into the students views about learning grammar in cooperative learning groups and whole-class groups.

Chapter 4: Results

A review of the literature (Chapter Two) showed that there has been a focused effort to improve ESOL grammar instruction through the use of cooperative learning. However, it was not clear what conclusions could be drawn from this previous research and the effects of using cooperative learning activities while learning grammar in a secondary ESOL classroom. Therefore, the purpose of this study was to examine the differential effects of cooperative learning and whole-class methods had on ESOL grammar instruction. Three primary research questions were posed. (1) Is there a difference in students' grammar proficiency development in ESOL classes employing small group cooperative learning activities versus whole-class instructional grouping? (2) How does student achievement differ between cooperative learning groups and whole-class instruction groups in relation to levels of extraversion? (3) How does a selected sample of students from secondary school ESOL classes describe their learning experiences in cooperative learning groups and in whole-class groups? This study attempted to find answers to these questions and to present information of use to ESOL teachers working with Hispanic high school students concerning how to set up impactful practice activities for their students while they study grammar.

For the quantitative portion of the study, data were collected from 75 students, 42 of which were assigned to cooperative learning groups and 33 assigned to whole-class groups. Each student was given the Junior Eysenck Personality Questionnaire Revised shortened version (JrEPQR-s) developed by Corulla in 1990 to identify the students' levels of extraversion (See Appendix A), and the parts-of-speech section of the Scantron Performance Series Language Arts assessment (SPS-LA) to determine the students' level of grammatical knowledge of the English

language. The SPS-LA served as both the pretest and posttest to measure student achievement of grammatical knowledge.

For the qualitative portion of the study addressed in RQ3, eight students (four male and four female) were selected based on their levels of extraversion as determined by the JrEPQR-s and interviewed both prior to the study and afterwards. Participants in the cooperative learning treatment group selected for interviews included one female and one male who scored 12, one male who scored 3, and one female who scored 0 on the JrEPQR-s. Participants in the whole-class instruction control group who participated in the interviews included one male who scored 11, another male who scored 9, one female who scored 5 and another female who scored 2 on the JrEPQR-s. Initially, the interviewees were questioned about their opinions concerning cooperative learning, whole-class learning, and independent learning in general and more specifically in their ESOL classes (See Appendix D). After receiving a series of 20 grammar lessons over a one-month period, the students were again interviewed to gain insights into their thoughts about learning grammar in general and more particularly learning in either cooperative learning or whole-class settings (See Appendix E). A guided semi-structured interview format was selected because it allowed the researcher to collect the same general information from each respondent, while also allowing for some flexibility to ask follow-up questions (Turner, 2010). Thus, the interview guide allowed for modifying the interview questions in accordance with the participants' responses.

Chapter 4 presents the statistical analyses of the data related to the test scores and is followed by the detailed analysis of data collected during the students' interviews and observations during the class practice activities. The students' responses appear verbatim and

the basis of the interpretations is coded themes and the researcher's findings. The results of the analysis relate to the three research questions.

Quantitative Analysis

This section presents descriptive statistical information on the JrEPQR-s and the SPS-LA parts-of-speech section. The descriptive results of the JrEPQR-s questionnaires are discussed in terms of levels of extraversion and were also used to select the participants in the qualitative portion of the study. The SPS-LA parts-of-speech results are discussed in terms of the pretest and the posttest.

The sample. A sample of 75 students was distributed among five high intermediate and advanced ESOL classes with 42 subjects receiving lessons that use elements of cooperative learning and 33 subjects receiving lessons which were delivered using whole-class activities. The students placed in the high intermediate level had Lexile scores between 850 and 1050, and the advanced level students had Lexile scores of over 1000 as established by the Scantron Reading test. Students could also have placed into either level based on the recommendation of their previous year's ESOL teacher(s). For students new to the district, Ballard and Tighe IPT test scores were used to establish the students' placement in ESOL classes. None of the students had received an overall passing score on the English Language Proficiency Assessment for the 21st Century (ELPA21) the previous year. Table 5 presents the demographic information for the total sample, the cooperative learning group, and the whole-class group.

The total sample was comprised of 47% female students and 53% male students. All of the subjects were between the ages of 14 and 18. Nearly 65% of the total sample was between 15 and 16 years of age. Similarly, nearly 75% of the total sample were in grades 9 and 10 with only 5% of the subjects coming from grade 12.

The cooperative learning group was made up of 52% females and 48% males. The whole-class group was made up of 39% females and 61% males. Concerning the subjects' ages, both the cooperative learning group and whole-class group had a mean age of 15.3. The subjects mean grade level was 9.9 for both the cooperative learning group and the whole-class group. Therefore, the two groups were equivalent with respect to age and gender distribution.

Table 5:
Total Sample Demographic Information

	<u>Total Sample</u>		<u>Cooperative Group</u>		<u>Whole-Class Group</u>	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
<u>Gender</u>						
Female	35	46.7	22	52.4	13	39.4
Male	40	53.3	20	47.6	20	60.6
Total	75	100	42	100	33	100
<u>Age</u>						
14	17	22.7	10	23.8	7	21.2
15	27	36.0	15	35.7	12	36.4
16	22	29.3	12	28.6	10	30.3
17	7	9.3	3	7.1	4	12.1
18	2	2.7	2	4.8	0	0
Total	75	100	42	100	33	100
<u>Grade</u>						
9.0	28	37.3	17	40.5	11	33.3
10.0	28	37.3	14	33.3	14	42.4
11.0	15	20.0	8	19.0	7	21.2
12.0	4	5.3	3	7.1	1	3.0
Total	75	100	42	100	33	100

JrEPQR-s. One scale from the JrEPQR-s was used to measure the students' levels of extraversion. Possible scaled scores ranged from 0 to 12 with higher scores corresponding with higher levels of extraversion. The descriptive statistical information is presented in Table 6.

Table 6:

Mean Scores for the JrEPQR-s Extraversion Scale

Group	n	Mean	SD
Cooperative	42	7.857	2.885
Whole-Class	33	8.000	2.537
Total Sample	75	7.920	2.720

The extraversion scale of the JrEPQR-s measured the subjects' levels of extraversion by their responses to twelve questions. Subjects with high extraversion scores are thought to be more sociable, active, talkative, and assertive while subjects with lower extraversion scores are seen as passive, quiet, and reserved (Eysenck, 1981). As presented in Table 6, the total sample, on average, showed a slight bend towards extraversion ($M = 7.920$) on the JrEPQR-s. Variation among the total sample was moderate with a standard deviation of 2.720. The extraversion level of the whole-class group was slightly higher on average than the cooperative learning treatment group ($M = 8.00$ and $M = 7.857$ respectively). Like the total sample, variations within the groups were also moderate.

Scantron Performance Series Language Arts Assessment. The parts-of-speech section of the SPS-LA was used to evaluate each student's grammatical knowledge. The participants received the grammar pretest one week before and the grammar posttest one week after the 20 grammar lessons were delivered. Table 7 shows the mean scores of the tests results for each group and the total sample.

Table 7:

Mean Scores for the SPS-LA: Parts-of-Speech Section

Group	n	<u>Pretest</u>		<u>Posttest</u>	
		Mean	SD	Mean	SD
Cooperative	42	2539.55	155.544	2577.07	173.487
Whole-Class	33	2536.70	187.833	2595.70	177.776
Total Sample	75	2538.29	169.327	2585.27	174.439

Pretest. According to Scantron, typically SPS-LA scores range from 1300 to 3700 (Scantron Corporation, 2011). Variation among the total sample was large, with scores that ranged from 2062 to 2875. The mean scores of the cooperative learning group and whole-class group were similar 2539.55 and 2536.70 which indicated that the two groups were quite similar prior to the treatment as just three points separated the two groups. Mean score variation within each group was also large, with scores that ranged from 2218 to 2827, a difference of 609 points for the cooperative learning group and from 2062 to 2875, a difference of 813 points for the whole-class group.

Posttest. Regarding the posttest, the variation among the total sample was larger than that of the pretest with scores that ranged from 2123 to 2962, a difference of 839 points. The posttest performance of the cooperative learning group averaged 2577.07 and the subjects' scores ranged from 2123 to 2920, a difference of 797 points. The whole-class group's mean performance on the posttest was 2595.70 and the subjects' scores ranged from 2204 to 2962, a difference of 758 points.

Research question one. The first research question asks if there is an effect on students' grammar proficiency in ESOL classes employing small group cooperative learning practice activities versus whole-class instruction and practice activities. To answer this research question, an independent samples t-test was conducted to compare the differences between the cooperative learning and whole-class groups SPS-LA parts-of-speech scores from the pretest to the posttest. The data were analyzed using SPSS 24.0. An alpha (α) level of .05 was used to determine significance levels. A significant difference was not found between the cooperative learning group ($M=37.523$, $SD=182.508$) and the whole-class group ($M=59.000$, $SD=182.003$) posttest scores; $t(73) = -.506$, $p = .614$. These results indicate that cooperative learning activities did not

have a greater effect on English grammar acquisition than whole-class activities. Specifically, these results suggest that when ESOL students taught using either cooperative learning groups or whole-class instructional groups make similar gains.

Contrary to what was originally hypothesized, the control group on average showed slightly greater gains from the pretest to the posttest than the treatment group. The average gain for the whole-class group was 59.000 points. Whereas, the average gain for the cooperative learning group was 37.523 points. Neither groups' gains were significant. Possible reasons for this will be discussed in chapter five.

Research question two. The purpose of the second research question was to examine if ESOL students' levels of extraversion influence their grammar proficiency development while studying in a small group cooperative learning environment versus studying in a whole-class environment. To attempt to answer this question, a multiple linear regression was used to determine if the independent variables of treatment group and level of extraversion might help to explain the results of the dependent variable of the difference between students' pretest to posttest SPS-LA scores (posttest – pretest) with the pretest score being included in the regression model. Each of the factors was hypothesized to possibly influence the posttest scores on the SPS-LA following 20 grammar lessons. The groups were dummy coded as 0 = treatment and 1 = control. To create the interaction term, JrEPQR-s scores were mean-centered prior to multiplying scores with the dummy-coded variable for the group. The data was analyzed using SPSS 24.0. An alpha (α) level of .05 was used to determine significance levels. Table 8 provides the descriptive statistics for the variables related to the second research question (RQ2).

Table 8:

RQ2: Descriptive Statistics

	Mean	Std. Deviation	N
Difference	46.973	181.369	75
Treatment	.44	.500	75
Extraversion Level	7.92	2.720	75

An analysis of standard residuals was carried out, which showed that the data contained no outliers (Std. Residual Min = -2.610, Std. Residual Max = 2.207). Tests to see if the data met the assumption of collinearity indicated that multicollinearity was not a concern (Extraversion, Tolerance = .999, VIF = 1.001; Group, Tolerance = .999, VIF = 1.001). The data did not meet the assumption of independent errors (Durbin-Watson value = 1.489). The histogram of standardized residuals indicated that the data contained approximately normally distributed errors, as did the normal P-P plot of standardized residuals, which showed points that were not completely on the line, but close. Finally, the scatterplot of standardized residuals showed that the data met the assumptions of homogeneity of variance and linearity.

Since no *a priori* hypotheses had been made to determine the order of entry of the predictor variables, a direct method was used for the multiple linear regression analyses. The two variables produced an adjusted $R^2 = .007$ ($F(2, 72) = .264$, $p = .768$) for the prediction of the differences in the SPS-LA pretest to posttest scores. Likewise, the extraversion scores did not significantly predict posttest scores ($\beta = -.062$, $t(75) = -.524$, $.602$). Nor could the treatment group help to predict differences in scores, and they were not significant ($\beta = .061$, $t(75) = .518$, $.606$) (Table 9). The beta and t test scores for the two variables can be found in Table 9.

Table 9:

Standard multiple regression of student variables of treatment and extraversion

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.	Collinearity Statistics	
	β	Std. Error	Beta	<i>t</i>		Tolerance	VIF
(Constant)	69.775	67.719		1.030	.306		
Treatment	22.063	42.631	.061	.518	.606	.999	1.001
Extraversion Level	-4.105	7.832	-.062	-.524	.602	.999	1.001

In addition to considering the treatment the students received and their levels of extraversion, an analysis of other variables that might influence student scores including gender, age, grade level, course grade, and pretest scores was undertaken. Multiple linear regression was calculated in Model 1, Table 10 to test if the students' pretest scores could significantly predict the student growth. The results of the regression indicated a significant regression ($F(1,73) = 25.249$, $p < .000$), with an adjusted R^2 of .247 suggesting that the pretest scores account for 24.7 percent of growth, leaving 75.3 percent unexplained by the data. Students' pretest scores proved to be significant in predicting improvement from pretest to posttest ($\beta = -.543$, $t(75) = -.507$, $.000$). Students' showed negative growth from pretest to posttest. Pretest scores continued to be a significant predictor of the students' posttest scores ($F(6,68) = 4.716$, $p < .000$), with an adjusted R^2 of .232 when taking other variables (treatment, introversion level, gender, GPA, and years of receiving ELL services) into account ($\beta = -.569$, $t(75) = -.531$, $.000$) Table 10, Model 2. This Adjusted R-squared suggests that the additional predictor variables did not improve the model fit. Possible reasons for pretest scores being a significant predictor of negative growth on the posttest scores will be discussed in chapter five.

Table 10

Standard multiple regression of pretest scores

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.507 ^a	.257	.247	157.40329
2	.542 ^b	.294	.232	158.98919

a. Predictors: (Constant), PreTest

b. Predictors: (Constant), PreTest, TreatementControl, ExLevel, Gender, YrsOfServices, GPA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	625570.831	1	625570.831	25.249	.000 ^b
	Residual	1808633.116	73	24775.796		
	Total	2434203.947	74			
2	Regression	715329.711	6	119221.619	4.716	.000 ^c
	Residual	1718874.235	68	25277.562		
	Total	2434203.947	74			

a. Dependent Variable: Difference

b. Predictors: (Constant), PreTest

c. Predictors: (Constant), PreTest, TreatementControl, ExLevel, Gender, YrsOfServices, GPA

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1425.257	274.894		5.185	.000
	PreTest	-.543	.108	-.507	-5.025	.000
2	(Constant)	1329.573	311.160		4.273	.000
	PreTest	-.569	.117	-.531	-4.878	.000
	TreatementControl	10.060	38.467	.028	.262	.794
	ExLevel	-3.733	7.252	-.056	-.515	.608

Gender	23.932	38.983	.066	.614	.541
GPA	13.501	31.961	.047	.422	.674
YrsOfServices	12.848	9.175	.153	1.400	.166

a. Dependent Variable: Difference

Possible reasons for pretest scores being a significant predictor of negative posttest scores will be discussed in chapter five.

Qualitative Analysis

The qualitative portion of this mixed-methods study examined the learning experiences of secondary school ESOL students who were learning English grammar in classes which employed cooperative learning groups and others that employed whole-class. The study involved purposefully selected research participants of certain genders and levels of extraversion who were informed about the research procedures and signed ascent forms to participate in the study during their high school ESOL classes. Two of the participants scored 12 out of 12 on the extraversion scale. One was Gina who was a fifteen-year old, sophomore who was part of the treatment group. She had been studying in the district for four years and had an 83% in the class at the time of the study. Gina was the most talkative participant and always seemed to be talking to the teacher, the class, her tablemates, or herself at volume that everyone could hear her. The other participant who scored at the top of the extraversion scale was Eddy. He was also a fifteen-year old sophomore and was part of the treatment group. He had been studying in the district for five years and had a 94% in the class when the study began. Although his extraversion score was the same as Gina's he did not talk nearly as much and was fairly soft spoken. His small group seemed to rely on Eddy to have the final word and to provide the "correct" answer. The third participant, Henry also scored very high on the JrEPQR-s

extraversion section with a score of 11 out of 12. Similar to Gina and Eddy, Henry was in the tenth grade and was fifteen years old, but unlike Gina and Eddy, Henry was part of the whole-class instructional group. He had a grade of 95% in the class and had spent his entire academic career in the district. Henry seemed to be friendly with everyone in the class and would often steer the conversation to the topic of soccer. Frank scored 9 out of 12 on the JrEPQR-s. He, too, was a fifteen-year old sophomore, and spent eleven years in the district. Unlike the previous three students, Frank had a lower grade in the class with a 68% when the study started. Like Gina, Frank was very talkative in class, and like Henry, his favorite topic was soccer. In the whole-class activities, Frank was the first to attempt to answer every question posed to the group. At the other end of the extraversion scale was Cindy who was the only participant to score zero on the JrEPQR-s. Cindy was also the oldest participant at eighteen, in 12th grade, and she had been studying in the district for eleven years. Cindy was part of the control group and had very minimal interactions with her classmates and only spoke to them when required to as part of a class activity. At the beginning of the study, she had a 74% grade in the class. Betsy also scored low for extraversion with a score of 2 on the JrEPQR-s. She was sixteen and in eleventh grade at the time of the study. She had been studying in the district for twelve years and had an 82% in the class. Betsy was part of the whole-class group. Although she was soft spoken, she seemed to get along very well with the girl sitting next to her, so she would often speak with her, however she had very little interaction with any of the other students in class. Don was the youngest participant at fourteen and in the 9th grade. He scored 3 on the JrEPQR-s and had an 88% in the class. Don had been studying in the district his entire school career. Don was part of the cooperative learning group and he never spoke to anyone outside of his small group. The last participant was Alice. She was a sixteen-year old 10th grader with a 100% grade in class. Alice

score on the JrEPQR-s was 5 and had been studying in the district for 11 years. Alice was part of the control group and similar to Betsy she talked a great deal with the student who sat next her, but not to anyone else in the class.

The participants agreed to be recorded during the pretreatment and posttreatment interviews. Interviews took place with all eight study participants to garner a deeper understanding of students' views of cooperative learning groups and whole-class groups in learning English in general and parts-of-speech specifically, and how well they felt they understood and were able to use (learn) the grammatical structures which were taught in class. The students' responses were presented verbatim and formed the basis of the themes interpretations. These exact responses, the researcher's observations concerning student behavior and students' levels of interest and engagement, and evidence of collaboration with other students while the subjects practiced using the grammatical structures help to form the basis of this research.

The pretreatment and posttreatment interviews took place in the teacher/researcher's classroom after the school day had ended. The setting was very familiar to the students who had spent eight months in the class with the researcher and the atmosphere was relaxed, which helped the subjects to participate more openly and share their genuine thoughts and reflections. The subjects knew that the interviews would not have any effect on their grade in the class and that they were participating of their own free will and would not be compensated for their participation.

The researcher attempted to identify primary themes related to the strengths and challenges of learning English grammar in cooperative groups and whole-class groups, and the students' preferences for either type of grouping when learning English grammar. The themes

identified reflected the students' impressions, positive and negative, about the use of two types of grouping strategies in learning English as a Second Language in general and English grammar in particular.

Research question three. The focus of this portion of the chapter is the third research question (RQ3), which was as follows: "How does a selected sample of students from secondary school ESOL classes describe their learning experiences in cooperative learning groups and in whole-class groups?" The general themes identified were a positive attitude by more extraverted students for cooperative learning in small groups and a positive attitude by less extraverted students for whole-class instruction in their classes and vice-versa based on the students' responses. Following the twenty lessons, the participants seemed to have had their opinions changed somewhat, and the more extraverted students were less negative about working in whole-class groups and the less extraverted students seemed to have become more positive about working in cooperative groups.

All of the students shared their thoughts and experiences working in cooperative learning groups and whole-class groups. Items 2 and 6 of the pretreatment interview questionnaire focused the participants attention on the use of small groups in general education classes and more specifically in their ESOL classes and were as follows: "In general, do you like when your teachers put you in small groups to do your classwork? Why or Why not?" and "In our ESL class, do you think working in small groups is a good way to learn? Why or Why not?" The aim of these questions was to elicit from the students their perceptions of small group cooperative learning and how effective they felt working in small groups was to their learning.

The students' responses to items 2 and 6 fell into two distinct groups. The students who were more extraverted were much more positive about small group cooperative learning. Both

Gina and Eddy used the term “fun” to describe working in small groups. As a whole, the extraverts pointed out what they felt were two advantages of working in small groups. The first reason was that cooperative learning often leads to students helping one another find correct answers. The extraverts who took part in the study appreciated the peer support the cooperative learning groups offered them. Gina commented, “If they do understand me then I like to work in small groups because I like to work with other people, and it gives me knowledge, like they teach me things I don’t know, like they correct me and everything and that helps me.” In a similar vein, Henry replied, “Honestly, I like it because I get more help and people have better thoughts than my thoughts and we get work done easily.” He went on to say that, “I don’t like to work alone because sometimes I need help. I have to ask other students for help.” Frank’s response to item 2 was, “I like the (small) groups because I don’t know if I did a mistake or not and they help me, and I can help them out.” The students seemed to favor cooperating with their peers. Eddy stated he like small groups because “most of the time everybody gives their opinions and someone does this and someone does that.”

A second reason those that were on the higher end of the extraversion scale felt positively about cooperative learning groups was that they believed such groups helped to keep students on track and avoid distractions in class. For instance, Gina explained, “I think some students they just get distracted anyway we have class, but in small groups we start talking more, and I think this is the better way to learn.” Similarly, Eddy said, “It’s better to work (in small groups) like you don’t have a lot of trouble like with a lot people. A small group has concentration.” Cindy, who scored at the bottom of the extraversion scale, also, felt small groups were better for learning than working independently. She expressed, “...I think it (small group work) is better

than to work alone, so you can focus on your own work because some people don't focus on their work. Sometimes, they don't do their work, or watch movies or something."

Although most of the comments were positive, some of the less extraverted students who took part in this study had some reservations about the use of small groups in class. Alice explained her reservations for small group work by saying, "I don't like it when I get put into groups because most (members of the group) have different opinions, and it's hard to just come to a conclusion and pick one because everybody wants to be the leader and nobody decides on that." She went on to say, however, that, "When someone doesn't know what to say, it's good sometimes to have more dominant people because they will say what the other students are thinking." Another negative comment was made by Cindy, "...some people don't talk at all. I feel like I have questions. Some people like they won't answer you, or just give you like simple questions." Betsy had reservations about the social aspects of putting students in small groups with students they were already familiar with and also being grouped with students who are unfamiliar. She explained, "Honestly, I get distracted. It depends on like if I'm in a group with one of my friends and we start talking about something else and we get distracted." On the other hand, if she did not have a friend in the group she explained, "I'm not going to lie, sometimes I don't talk in groups like if I don't know the people that I'm with then I might just say a couple of words, so then after that I will stop, and I won't say anything else." Don agreed with Betsy, "I think students get more distracted in small groups because they can just be on their phones." Also like Betsy he shared his anxiety about being forced to talk in small groups, "...the bad thing is I have to talk to people I don't really know a lot, like to people I don't really know."

Students at both ends of the extraversion spectrum who worked in cooperative groups seemed to view their experience in a positive light based on the responses they gave during the

posttreatment interviews. This was reflected in their responses to item 3 of the posttreatment interview questionnaire which asked if they liked working in their groups. Eddy stated, “I like working in the group because I always thought our group work is like better than individual work. There is more communication and like helping each other.” Gina responded to the question by saying, “Every time I got an answer wrong my partners would explain it to me, so we helped each other when we don’t understand things and they were helping me, so I liked it.” She went on to say, “I really liked it because you know people (were) giving different ideas and it made me a better learner. I think working in groups was the best part because it helped.” Even one of the less extraverted students became more positive about working in a small group. Don told the researcher, “I felt comfortable with my group. I feel like I could say everything I needed to say. My group didn’t really get on me about not talking too much. I did what I could. They didn’t ask me to talk more.” Another of the more introverted students, Betsy, also saw the benefits of small groups, “I feel like I have a better chance to, like, speak because in a big class there’s a lot of people with different answers, but in the small group, I feel like I can have my opinion out more. Some people prefer not to speak in big groups, so I think it would be helpful if we do smaller groups.” The only negative comments came from Cindy, the least extraverted student who took part in the interviews. She felt that the cooperative learning group slowed her down. When asked about working with her small group, she said, “I would have liked to have done it by myself. Then, I could have got it done faster. The other people kind of slowed me down. If they knew (the answers) than I might have asked them, but I would rather talk to you (the teacher).” She also criticized her tablemates for not participating, “They didn’t try it (the practice activities) because they don’t like it, and they think they already know how to do it.”

The researcher's observations seemed to back up the claim that students across the extraversion spectrum appeared to enjoy working in small groups. Students who took part in the cooperative learning activities demonstrated in general positive attitudes. Smiling and laughing during the activities was recorded regularly in the field notes. There were also no instances of redirection or students being off track recorded in the field notes. The cooperative learning groups gave the impression of being focused and working diligently on the practice activities.

The students also shared their feelings about working in whole-class groups. Items 3 and 5 of the pretreatment interview questionnaire asked the subjects to give their opinions about the use of whole-class groups in both their general education classes and ESOL classes. Item 3 stated, "In general, do you like when teachers put you in one large group to do your classwork? Why and Why not?" Item 5 asked, "In our ESL class, do you think working with the whole-class is a good way to learn? Why and Why not?" The aim of these questions was to get to students to reflect on their previous learning experiences and how they felt about whole-class group instruction and its benefits.

The responses of the less extraverted students to Items 3 and 5 were quite different than their responses to Items 2 and 6. These students gave more positive responses when asked about working in whole-class groups. Betsy explained, "It's good when the teachers are there and can answer your questions, so they can give you the correct answers, even if I don't ask too many questions." Cindy stated, "I like it (whole-class instruction) better because it's just better because the teacher knows more. I like it because the teacher knows more, and I like to have the right answers. It is important to me to have the right answers." She went on to add that she preferred large groups because, "I think in a big group they (the other students) pay more attention." Alice agreed with the other less extraverted students by stating, "I prefer it (whole-

class groups) because...if you have questions and it's not just me having a question but an answer for the whole-class, and you (the teacher) can give us the answer back and more details about it." Dan gave a similar positive response saying that, "I like it because like when we do the bell work wrong or something you will point it out and see what we got wrong, so we can correct it or something like that. I like having an expert."

The more extraverted students were less positive about whole-class instruction. Frank responded as follows to Item 3:

I like it (whole-class instruction) a little, but it's not as good because like when you fall behind everyone is having trouble keeping up with everything and the teacher. If you have a question, you can't stop the teacher or if I do, everything will just get out of hand. Sometimes I get behind, and I can't catch up, and I just don't understand, but in a (cooperative learning) group I don't feel that as much. Like everyone is just there and they will help you out or you (the teacher) will help us out somehow,

Gina explained her point of view by saying,

"I think sometimes people get distracted because it is like I said an individual thing. If we don't know (an answer), also you (the teacher) can't help us. It is fun when you get into groups," "...when we were in like rows in our class, I'm like I don't know who to ask, when I'm in a group I feel like more like to ask somebody. When I'm in rows, I don't know who to ask when I feel like more to ask somebody."

She also pointed out that students can get lost more easily in a whole-class setting. "You'll just be on your phone because you don't know what to do or you don't listen. You just try to go another way and don't listen." Henry had similar reservations about whole-class instruction, "Sometimes (I like whole-class instruction), but not really because some students don't really pay attention. They're on their phones and you can hear them (playing) music. They just talk over the teacher, so you can't really hear what he's trying to say." Even Alice, one of the introverts, recognized that it can be hard for students to pay close attention in whole-class

settings, “Sometimes people might not listen and might have their own conversations, but I don’t see it as having too many problems.”

In the posttreatment interviews, the less extraverted students who took part in the whole-class groups continued to have positive views of this type of instruction: Alice reported, “The teacher in the big group has more control, and I can tell if people are slacking off in the big group. You (the teacher) can easily point out if they are doing the work or not.” In addition to feeling like the class was more under control, the more extraverted students also seemed more positive about whole-class instruction: Henry reported during the posttreatment interview, “I liked it (whole-class instruction). I like doing it in the big group because it’s much easier. Basically, I knew that we would get the answer and that makes it much easier. I didn’t mind working in the big group.” Apparently, he felt that whole-class instruction improved his ability to know what the correct answer was.

Chapter five contains a more in-depth discussion of both the quantitative and qualitative findings. In addition, discussion of how the findings contribute to the body of existing literature, as well as their implications for theory, research, and practice in ESOL education are also provide in the final chapter of this dissertation. It also contains a discussion of the limitations of the methodology used and several shortcomings of this study. It concludes with suggestions for future inquiry.

Chapter 5

Chapter 5: Discussion and Findings

This chapter includes a brief review of research and conclusions drawn after analyzing both the quantitative and qualitative data collected on the effects of the trait of extraversion/introversion and cooperative learning instruction versus whole-class instruction in learning English grammar. A quasi-experimental design was used to make comparisons between the treatment and control groups and the influence of students' levels of extraversion on their language development. The study participants were provided instruction on the use of English parts-of-speech (verbs, nouns, pronouns, adjectives, adverbs, and conjunctions). The instruction was made up of a series of twenty lessons of approximately fifty minutes in length which included a short video presentation on the part-of-speech (5-10 minutes) followed by practice time (20-30 minutes) and concluding with a short formative assessment (5 minutes). For the practice portion of the lessons, students in the treatment group worked in cooperative learning groups which included positive interactions, individual accountability, equal opportunities to participate, and group processing. The control group completed their classwork as a whole-class and their practice activities stressed individual accountability and group processing. Based on the results reported in the previous chapter, neither the treatment nor the control group showed significant improvement on the Scantron Performance Language Arts (SPS-LA) parts-of-speech section when comparing students' gains from the pretest and posttest. Prior to the treatment, the participants were also surveyed to find where they fell on the extraversion/introversion spectrum using the revised Junior Eysenck Personality Questionnaire, shortened version (JrEPQR-s). For the students who were part of the treatment group, where they fell on the extraversion spectrum showed no significant effect on their SPS-LA scores as measured by the pretest to posttest.

The significance of the findings for the qualitative portion of the study were determined through the description and interpretation of the participants' responses. The participants described how they felt while working in the treatment and control groups and how different types of grouping strategies affected their English language development. Their responses were coded using deductive analysis and meaningful themes were identified.

Three research questions guided this study and will be discussed in detail. The discussion includes a summary of the findings, an explanation of the findings, and an examination of the relationship between the findings of this study and the existing literature. The research questions were as follows:

1. Is there a difference in students' grammar proficiency development in ESOL classes employing small group cooperative learning activities versus whole-class instructional activities?
2. How does student achievement differ between cooperative learning groups and whole-class instructional groups in relation to levels of extraversion?
3. How does a selected sample of students from secondary school ESOL classes describe their learning experiences in cooperative learning groups and in whole-class groups?

In addition to the discussion of the findings, implications for theory, research and practice will be presented along with delimitations and limitations of the present study. This chapter concludes with suggestions for future research.

Effects of Cooperative Learning and Whole-Class Instruction on Grammar

The first research question focused on the effects of cooperative learning and whole-class instruction on learning English parts-of-speech. Contrary to what was hypothesized, the results of this study indicated that students who worked in cooperative learning groups did not

outperform their counterparts who worked in a whole-class setting. In fact, the students in the control group showed slightly higher average gains on the posttest as compared to the treatment group. The average gain for the whole-class group was 56.97 points. Whereas, the average gain for the cooperative learning group was 39.00 points. Neither groups' gains were statistically significantly different from each other. These findings diverge with those of previous research on the benefits of cooperative learning on academic achievement in a wide range of subjects (see Johnson & Johnson, 1989, Slavin, 1995), and more specifically with second language students (e.g. Bejarano, 1987; Calderón et al., 1998; Klingner & Vaughn, 2000; Liang, 2004; Pica & Doughty, 1985; Porto, 2001; Yazdani-Moghaddam & Fakhraee-Faruji, 2013).

More practice. One of the strongest arguments for the use of cooperative learning is the belief that students get more practice using the second language (L2) when working together in small groups. In whole-class instruction, students may have very few opportunities to interact with their peers, whereas in cooperative learning one of the primary advantages is thought to be that multiple interactions can occur simultaneous in the classroom. More numerous peer interactions, it is thought lead to greater production in the target language. This greater production contributes to a greater amount of comprehensible output given and more comprehensible input being received. More output it is thought to lead to more opportunities to receive corrective feedback as interlocutors respond to what is said. This belief is supported by research done by Pica and Doughty (1985) who found that individual students working in small groups had more opportunities to practice using English as a second language than in teacher-fronted discussions. The researchers found that students took more turns, produced more content in the target language, and received more feedback from other group members. Liang, Mohan,

and Early (1998) also found that cooperative learning offered second language learners more opportunities for interaction in the target language being studied.

Contrary to what was hypothesized both the control and treatment groups made similar gains on the SPS-LA. It was observed during the study that there was a greater amount of peer interaction between the students taking part in cooperative groups, however this did not seem to make a significant difference in how much language they acquired. While there are many possible reasons for this lack of significant differences, two possible reasons were insufficient practice time to move what was learned from short-term to long-term memory and approximately equal levels of engagement with the content.

Based on the results of the posttest and the lack of significant gains, it is evident that neither group gained control over the grammatical structures presented in the lessons. This may indicate that neither group had sufficient time to practice using the parts-of-speech presented in the lessons for them to be acquired, nor to develop automaticity in their use. The students had approximately fifteen to twenty minutes of practice time as part of each lesson before taking the formative assessment. Since both groups had approximately the same amount of time to practice using the targeted grammar structures and made similar gains on the SPS-LA, it might be the case that if given more time to work with the content both groups might have made greater gains, or that differences between the treatment and control groups might have become more apparent.

The reasoning that more practice time might have made a positive difference in student scores seems to also be supported by the differences between the short, formative assessments given after each lesson and the summative assessment given at the end of the treatment. The formative assessments were very brief consisting of just four, multiple-choice items. However, the questions for these formative assessments were very closely aligned with the questions that

were asked on the posttest, and they were taken directly from original Scantron practice materials and as such followed exactly the same format as the SPS-LA. The students performed very well on these short assessments immediately following the lessons with students scoring above 75 percent on average. These results were encouraging and seemed to indicate that the students would do well on the summative test. Unfortunately, this was not found to be the case, and at the end of the treatment, the summative assessment indicated that the student had not made significant improvement on the SPS-LA. Neither grouping arrangement seemed to affect the movement of the new learning from short-term awareness to long-term memory. It seems possible that this lack of cognitive stickiness might be due to insufficient time to practice with the materials and as such, diminished opportunities to build schema related the target materials.

Another possible explanation for the two groups having such similar results is that it is the students in both the control and treatment groups cognitively engaged with the materials at similar levels. It was hypothesized that cooperative learning would lead to greater student engagement. However, it appears that cooperative learning does not automatically translate into a situation where greater student engagement is insured. It was observed that both the students in the control and treatment groups seemed equally engaged and interested in learning the materials during the lessons based on their body language, eagerness to answer questions, and the number of students who completed their assignments. As such, students in both groups seemed to be most concerned with fulfilling the instructional tasks they were assigned, and they seemed to be less concerned with how they were grouped and asked to interact with their peers. Cooperative learning alone was not sufficient for increasing the students' cognitive engagement with the content when compared with whole-class instructional groups.

The troublesome finding that pretest scores were a significant predictor of posttest scores in a negative direction ($\beta = -.543$, $t(75) = -.507$, $.000$) might also support the argument that the students did not have a sufficient amount of time to practice working with target grammar structures to make a positive difference. Overall, the students ($n=75$) on average scored 46.973 points higher on the posttest. However, the higher the students scored on the pretest the more likely they were to show negative growth on the posttest. It may have been the case that with such a limited amount of time to have their consciousness raised about the parts-of-speech presented in the lessons and also with the limited amount of time to practice using the target structures, students became more confused about their proper use. It has been noted in previous literature that as students become more advanced in their target language abilities, the grammatical structures they use become more resistant to change. This resistance is sometimes referred to as “fossilization” (Selinker, 1972). Fossilization is thought to be the result of students not having a communicative need to change the grammar they are using, and as such, their use nonstandard forms become permanent. In other words, their grammatical abilities do not impede their perceived capabilities to communicate in the target language, thus they never change. More recently, the idea of a language “plateau effect” has been discussed (Richards, 2008). The plateau effect is thought of as a temporary phenomenon and a natural part of the learning process as students move from intermediate to advanced levels. It is possible that the students who were in this intermediate to advanced range were given enough information to make them conscious about their use of the various parts-of-speech, but that not given enough time to practice using this new formed knowledge to become adept at its use. This may have led to the students became more confused. In order to help the type of students who took part in this study to move beyond their current plateaus, more time to raise their awareness about their nonstandard use of

the grammar and more importantly to allow them to practice using the targeted structures so that they become adept in their use might well be necessary.

Improved accuracy. In addition to providing more opportunities to practice the target content, it has been argued that students working in cooperative groups also have an increased likelihood of improving their accuracy in the second language (Durán & Szymanski, 1995; Romney, 1997). While working cooperatively, students are encouraged to discuss, elaborate, negotiate, and correct their peers' errors in the target language which it is thought helps students develop greater grammatical accuracy. Cooperative learning leads to more negotiated meaning between interlocutors which in turn requires students to display higher levels of cognitive interaction. Calderon, Hertz-Lazarowitz, and Slavin (1998) stressed that cooperative learning would engage students in frequent, cognitively complex interactions and because of this; it is thought that students would then become more precise in their language use.

In the present study, both the treatment group and the control group improved their grammatical accuracy at equivalent levels. That is to say, while both groups made improvement neither group showed significant improvement following the treatment. These results make it difficult to conclude that cooperative learning was advantageous in learning English grammar or developing accuracy in its use. It was hypothesized that by increasing the amount of peer interaction during the practice phase of the lessons in which the participants discussed, negotiated, and corrected one another it would help to focus the students' attention on the grammar being taught which in turn would lead to the student improving their accuracy in using English. The results of the SPS-LA seem to indicate that greater accuracy in the use of the language cannot be guaranteed simply by increasing the amount of peer interaction that takes place in a language class.

Another possible explanation for the cooperative learners' lack of significant improvement was that the practice activities and materials might not have been cognitively demanding enough to capture the students' attention and cognitive focus. Perhaps the practice materials were so similar to the presentation materials that no negotiation of meaning was necessary and very little was demanded of the students cognitively in order to get the "correct" answers on the practice materials and formative assessments. In other words, the students only mimicked what they had seen during the presentation stage of the lessons without truly understanding the materials and without having to make cognitive connections to their previous learning. Likewise, the formative assessments might have also been an exercise in mimicking, as the assessments closely followed what was presented in the lesson only a few minutes prior to the formative assessments. In contrast, by the time the students took the summative assessment it had been many days since the students had interacted with the materials. This significant time lapse would have made it nearly impossible to simply mimic what had been covered in the treatment lessons.

Promotes positive attitudes. A third suggested benefit of cooperative learning in second language acquisition is that it promotes positive attitudes among language learners (Dörnyei, 1997; Gunderson & Johnson, 1980; Gwyn, Paquette & Tochon, 2003; Oxford & Anderson, 1995; Szostek, 1994). It is thought that students' affective filters (Kagan, 1994) are lowered when working in small groups of students in which the members have had time to build trusting relationships. Students' attitudes about learning an additional language are influenced by their peers and their support.

The present study did not survey the students specifically about their attitudes towards working in cooperative learning groups versus whole-class groups. However, the researcher did observe the students from both groups during the lessons. No differences were observed either

positively or negatively in the attitudes of the students with regard to learning language while working in either type of group. In general, the students seem to have similar attitudes about learning English. At no time during the study, did the students complain or voice any other reservations about working in either class arrangement. If they had any misgivings, it was not noticeable, and it did not seem to be displayed either positively or negatively in their attitudes.

The lack of differences between the treatment and control groups attitudes may have to do with when the study occurred. The majority of the students who took part in the study had been studying together in the same class for nearly two semesters. Many of the students had gone to school together for several years and had taken other classes together. Therefore, they had already formed collegial relationships with one another prior to the treatment. Their attitudes and behavioral routines were already very well established prior to the studies commencement. Throughout the school year, the students in the various classes had numerous opportunities to work with one another informally as well as formally on projects and other exercises in the regular course of the class which in all likelihood helped them to develop relationships with one another and not feel that the other students were completely unfamiliar. In fact, building student comradery was a point of emphasis at the beginning of the semester when numerous class-building and “getting to know you” type activities were included in the lessons. If the students had been unfamiliar with one another prior to the study, their affective filters might have been higher and this might have had a negative influence on their attitudes. As it was, the students in both groups were already comfortable with each other and this is likely to have contributed to what appeared to be lowered affective filters.

The arguments supporting the superiority of cooperative learning over whole-class instruction in learning English grammar did not seem to be supported by the current study. The

students in the cooperative learning groups did not outperform their peers who received whole-class instruction. The students in the treatment group did interact with their peers more than the students in the control group, however this did not in turn lead to greater gains on the SPS-LA.

Effects of Levels of Extraversion on Grammar Development

The second research question investigated how levels of extraversion and introversion influenced High School ELLs grammar proficiency development while studying in cooperative learning groups made up of three or four students versus studying in a whole-class environment made up of twenty to twenty-four students. Levels of extraversion were measured using a shortened version of Junior Eysenck Personality Questionnaire Revised (JrEPQR) which was first developed by Eysenck, Eysenck, and Barrett (1985) and later shortened by Corulla (1990). It was hypothesized that students who self-identified as being more extraverted as measured by the JrEPQR-s would make greater gains from pretest to posttest on the parts-of-speech section of the SPS-LA assessment when receiving the cooperative learning treatment. Conversely, the students who were identified as being more introverted it was hypothesized would show lower gains on the posttest after working in cooperative learning groups. The findings of this study, however, did not support this hypothesis and no correlation was found between levels of extraversion and gains on the SPS-LA. The two variables produced an adjusted $R^2 = .016$ ($F(2, 72) = .598, p = .553$) for the prediction of the SPS-LA posttest scores. These findings diverge from those of previous research on the benefits of cooperative learning for second language learners with higher levels of extraversion (e.g. Brown, Robson, & Rosenkjar, 2001; Ehrman, 2008; Lightbown & Spada, 2006; McDonough, 1986; Swain, 1985; Zafer & Meenakshi, 2012) and converge with previous research that indicated that levels of extraversion had little if any

effect on second language acquisition (e.g. Chen, 2013; Ehrman & Oxford, 1995; Naiman et al., 1996; Sharp, 2009; Wakamoto, 2007).

Superior communicative abilities. Cook (2001) as well as MacIntyre and Charos (1996) felt that language learning based on communicative techniques that emphasize interaction as both the means and the ultimate goal of study a language might favor extraverts. Learners who seek out more interactions (i.e. extraverts) it has been suggested are likely to make faster progress in a target language. This point of view is also held by many classroom language teachers who believe that extraverts have a greater chance of success in learning a target language because of their superior communicative abilities (Lightbown & Spada, 2006). It is thought that students who are more introverted may not be exposed to the same quantity of interactions and as such might not make as much progress or develop as rapidly in the target language. The current study does not appear to support this theory, and it would seem that if the extraverts did have stronger communicative abilities, those abilities did not lead to improve performance on the SPS-LA assessment when compared to the more introverted students who also took part in the study.

It might be the case that the structure of the cooperative learning activities the students undertook made it possible for students across the extraversion spectrum to perform equally well on the assessment. One of the four principles of Kagan Cooperative Learning, on which most of the cooperative learning activities were based, is that students should have equal participation (Kagan, 2009). Equal participation is seen as necessary for equitable educational outcomes. In general, the students were given either equal turns, equal amounts of time, or a combination of both. This may have led to the more extraverted students being more contained while they waited for their turn to participate, and conversely, the more introverted students may have been

able to participate more readily because they were given more turns and/or time to interact than they were naturally inclined to do. The result of this emphasis on participation equality may have been to reduce the more extraverted students' advantage as superior communicators which was hypothesized.

Extraverts maximize language output and corrective feedback. In the present study, it was hypothesized that more extraverted students would be particularly well suited to learning in cooperative groups with their innate propensity to seek out interactions with others. It was thought that increased language output would lead to more opportunities to receive corrective feedback as they worked in their small groups. In a whole-class setting, it was hypothesized that overall it would be less beneficial for developing the grammatical accuracy of the extraverted students because they would not get the benefit of increased levels of peer feedback and correction as most of the feedback would be giving by the teacher whose attention would be divided amongst all the students in the class. In contrast, the more extraverted students would have increased levels of output, both in terms of the number of opportunities for peer interaction (turns) and the amount of time, while working in cooperative groups which would lead to more corrective feedback from peers. More time and more opportunities to elicit feedback might be advantageous in improving the grammatical accuracy of the extraverted students over their more introverted peers who might be reluctant to take as many turns or as much time. Ellis (2008) suggested that the aims of the language learners might determine whether extraversion or introversion is advantageous in learning the target language. It may be the case that more extraverted students see the cooperative groups as an opportunity to have more interaction with their peers which has the potential to lead to more output in the target language, however this opportunity for output did not seem to translate to the more extraverted students' improving their

understanding of English grammar at greater rates than their less extraverted peers. One explanation for this may be that the more introverted learners also had more opportunities to increase their outputs while interacting with their fellow students in their cooperative learning groups because there was an emphasis on equal participation. It is possible that students across the extraversion spectrum benefited at equivalent levels due to the cooperative learning strategies that were employed as part of the treatment. What this study seems to indicate is that output and corrective feedback levels were not sufficiently different to give the more extraverted students a natural advantage in the development of grammatical accuracy. Students across the extraversion spectrum seemed to improve at similar rates and to similar levels. In the end, contrary to what was hypothesized the more extraverted students did not improve at higher rates than their more introverted classmates while working in cooperative groups.

Introversion linked to accuracy. There have been studies linking lower levels of extraversion (i.e. introversion) to better performance on grammar assessments (Altunel, 2015; Robinson et al., 1994; Sharp, 2009). It is thought that less extraverted students have the ability to concentrate more deeply and for longer periods of time and as such can focus on the details of a language which ultimately leads to more accurate use of the target language over time. In this regard, the treatment was designed to have students focus intensely on one discrete grammar point during each lesson. The students were asked to concentrate for approximately 50 minutes on one particular grammar point. This required level of focus seemed to be more suitable for the more introverted students taking part in the study. However, such an advantage was not found, and the students who were identified as being on the less extraverted end of the spectrum did not show such an advantage as measured by their performance on the SPS-LA.

In a similar vein to the reason given in the prior section, equal participation might have also been beneficial for the more extraverted students. It likely helped them focus on the inputs they were receiving and would have ignored if they were not required to listen to their peers. This may have helped them to pay closer attention to the finer details of English grammar presented in the lessons than they were naturally inclined to pay. In the previous section, it was argued that building equal opportunities into the lessons was beneficial for the more introverted students because it increased their output and opportunities to receive peer correction. Because of the equal participation requirement built into the cooperative learning lessons, the more extraverted students could not dominate their groups' time and were required to listen to their peers. This might have been beneficial to the more extraverted students by increasing the amount of input they received as well as the amount of corrective feedback they provided to their groupmates.

While it was hypothesized that the more extraverted students would display greater gains than their more introverted peers on the SPS-LA when working in cooperative groups, the results of the study showed that neither group made significantly greater gains than the other. It could be the case that the way the cooperative learning structures were implemented helped all students regardless of their levels of extraversion to perform equally well. In particular, the requirement that students strive for equal participation in terms of opportunities to interact and the amount of time for the interactions led to students across the extraversion spectrum to make similar gains. The more extroverted students were not allowed to dominate their groups and the introverted students were encouraged to participate more than they typically would.

Participants' Perceptions of Grouping Strategies

The third research question focused upon the participants' perceptions and feelings concerning working in cooperative learning groups versus working in whole-class groups while

learning English grammar. The participants were interviewed one week prior to the treatment and again one week afterwards in order to gain insight into what they valued about the two different grouping techniques. The analyses and findings of the qualitative part of the study were taken from the students' statements and the themes that were identified from the data collected. The participants' experiences are valuable because they can help build our understanding about what students are interested in, concerned about, and how they view their abilities to learn English (Table 2).

The participants had differing opinions about the usefulness of small group work and whole-class instruction. In general, the more extraverted students seemed to favor cooperative learning in small groups as Gina one of the most extraverted students said, "In small groups we talk more, and I think that is a better way to learn." The first reason the extraverts gave for this preference was that they like having peer support and felt that it was helpful in finding the most correct answers on the work they were asked to complete in class. As Gina explained, "If they understand me (with a heavy accent), I like to work in small groups. They can teach me what I don't understand and correct me." She also like the interactive nature of the cooperative groups and stated, "In small groups we talk more, and I think that is a better way to learn." Henry was of a similar opinion stating, "I don't like to work alone. I need help. I have to ask other students for help." He went on to say that, he thought working with his peers cooperatively was advantageous because in a group they could get their work done more easily and accurately. "I honestly like small groups because other people have better thoughts then my thoughts and we get work done easily."

The second reason the more extraverted students preferred cooperative learning was that it helped them to avoid distractions and therefore stay on task. Frankie discussed how he helped

to keep his group on task, “If they get distracted I like to get them back on track. If they are not doing too much then I try to get them involved.” Eddy also took on a leadership role to help his tablemates to stay focused, “I was the one that made sure we got our work done and made everyone help.” As discussed in Chapter 3, extraverts are thought to be under aroused, so they are continually looking for new and different stimuli to keep their interest. They are thought to be easily distracted and less focused particularly on fine details. While working in small groups they recognized that they were more focused because their peers in the groups forced them to pay attention. As Eddy put it when comparing small and large group work, “A small group has concentration.” The ability to have greater focus was also brought up by Gina when she pointed out, “...I think some students they just get distracted anyway we have class, but in small groups we start talking more, and I think this is a better way to learn.”

The more introverted interviewees were less positive about cooperative learning in small groups in large part because of difficulties with communication. For instance, Alice felt that it was difficult to make decisions and complete work as a group. “...most (members of the group) have different opinions, and it’s hard to just come to a conclusion and pick one (answer) because everybody wants to be the leader and nobody decides on that.” To make decision-making and drawing conclusions easier, Alice suggested that roles be assigned to group members, “I liked that you (the teacher) chose the leaders of the groups and like last week, the person who does the time management, and the one who is going to write stuff down, so that it is more organized.” Another communication problem that sometimes occurs in small groups and that was pointed out by Cindy was, “...some people don’t talk at all. I feel like I have questions. Some people, like, they won’t answer you, or just give you like simple questions.” She further explained that, “Not everyone participated. Like, they didn’t try to do it (the practice activity) because they think they

already know how to do it. They didn't have a bad attitude. They were just lazy." Betsy recognized that she was type of student Cindy was referring to and took responsibility for some of her group's communication difficulties when she admitted, "I'm not going to lie, sometimes I don't talk in groups like if I don't know the people that I'm with then I might just say a couple of words, so then after that I will stop, and I won't say anything else." However, Betsy did say that she was more likely to give her opinions in cooperative groups than in whole-class groups. Don also confessed that he did not like working in small groups because he did not like talking to people he did not know well, and that he did not participate as much as other group members, "...the bad thing is I have to talk to people I don't really know a lot."

When discussing whole-class instruction, the more introverted students made many positive comments. They liked learning in a whole-class environment because they felt that the teacher was ultimately going to give them the right answer and this was better than having to rely on other students for answers. Alice expressed this sentiment by saying, "I think it's good when the teacher is there and can answer your questions, so they can give you the correct answers even if I don't ask too many questions." She went on to say, "I feel like more people ask questions in a big group." Cindy said she liked whole-class instruction because "I like it that the teachers know more, and I like to have the right answers. It is important to me to have the right answers." Alice also felt that in whole-class environment the teacher had more classroom control and it was easier for her to concentrate, "I don't like being cluttered in small groups when I am learning something new. Because everyone was focusing on the board and directly facing the board, I was less distracted and nobody was looking at me." She went on to say that the people in the back of the room "...stayed on track and didn't bother other people."

The more extraverted students were less enthusiastic about whole-class instruction because they did not feel that they received as much academic support in the large group. In the small groups, they could get help from their groupmates, but in large groups, they felt that the only person who could answer their questions and give them help was their teacher. This posed a problem for them because they did not want to interrupt the lesson by asking questions. As Frankie said, “If you have a question you can’t stop the teacher or if I do (then) everything will just get out of hand. Sometimes I get behind, and I can’t catch up, and I just don’t understand.” Gina explained a similar difficulty with whole-class instruction, “When I’m in rows, I don’t know who to ask. When I am in (small) groups I feel more like to ask somebody.” The extroverts also pointed out that students seemed to have more trouble paying attention during whole-class instruction. Once a student had trouble understanding the content of the lesson and they felt that they would not be able to understand without more explanation, they would stop paying attention altogether and find other things to do in class for amusement such as listening to music or chatting with their friends. Henry gave his biggest grievance about whole-class instruction by complaining, “Some students don’t really pay attention, they’re on their phones and you can hear them, music, and they just talk over the teacher, so you can’t really hear what he (the teacher) is trying to say.” However, similar to the primary benefit pointed out by the more introverted students, Henry did see some benefit to whole-class instruction namely that it made it easier to get the right answer. “I liked it (whole-class instruction). I like doing it in the big group because it’s much easier. Basically, I/we would get the answer (from the teacher) and that makes it much easier.”

Participants’ concerns and suggestions. The focus of the student interviews was to collect the opinions of both extraverts and introverts about how they felt about working in small

and large groups. One thing that was not anticipated by the researcher, but became readily apparent in the course of the interviews, was that the most crucial issue for a majority of the students was that their classwork was done correctly. How they were being grouped made little difference to them as long as they got the right answers on the exercises. Whether help came from their teacher and/or classmates, they wanted to complete their practice exercises with as much accuracy as possible. There was a slight difference between the two personality types with the more introverted students preferring whole-class activities and the extraverted students preferring cooperative learning groups. The introverts felt that it was easier working directly with the teacher while the more extraverted students felt that by cooperating with their peers the work was made easier. Similarly, the more extraverted students felt that whole-class instruction was more distracting and that it was harder to complete classwork in such an environment. Whereas, the more introverted students had the opposite opinion and felt that small groups lead to more distractions. However, it was clear during the course of the interviews that accuracy on practice materials was a far greater concern to the students than how they were being grouped.

Another issue that many of the students spoke about had to do with fairness. When working in small groups, they did not appreciate when some students did not actively participate or contribute to the group's success. Students across the extraversion spectrum wanted everyone in the small groups to do their fair share of the group's work. They had very little use for group members who just waited for the rest of the group to give them the answers, i.e. trying to freeride. Betsy expressed this sentiment as follows, "I don't think it is fair because some people even didn't do the work and they got the answers from the people who actually worked to them the answers, so I don't think it was fair." Henry stated, "I feel like they (fellow students) don't listen to me. They just keep talking. They just want to copy and get a good grade for it. You're

doing all the work, and they're doing nothing.” The students preferred when group responsibilities such as leading the groups, reading questions to the group, recording final answers, and sharing answers with other groups were rotated during the exercise. One of the few instructional suggestions made during the interviews came from Alice who requested that roles be assigned to each group member such as manager, spokesperson, and recorder. She liked having group roles because it helped the students organize themselves to get work done, and it was also a check on any one student dominating the group. Don also stressed the need for taking turns because as he said, “I think I got some practice.” The students did not seem to hold egalitarian beliefs, and they did not expect everyone in their groups to make equal level and/or numbers of contributions; however, they did expect every group member to contribute something. The participants seem to have an innate fairness instinct with the equal participation principle being very important to them when learning in cooperative groups.

A final suggestion made by the students during the post-treatment interviews was that the practice activities include more games. Five of the eight students interviewed mentioned that they liked playing the Kahoot.com games whether as individuals in the whole-class setting or cooperatively with their peers in pairs and small groups. The gamification of the practice exercises helped to keep the students more engaged because they felt that the games were fun and interesting.

Implications for the Present Study

The findings of the present study have contributed to our understanding of the effects of cooperative learning and the personality trait of extraversion in a high school ESOL context. There has been limited previous research concerning the interplay between grouping practices,

the personality trait of extraversion, and grammar instruction in an ESOL context (Ehrman, 1989). Implications of the findings can be discussed in terms of theory and practice.

Theoretical implications. With respect to cooperative learning theory, Kagan (2009) proposed seven advantages for its use with English Language Learners. Not all of these advantages were apparent in the current study, however three seem worthy of discussion. Kagan argued that the greatest advantage of having students work in cooperative groups was that it leads to greater language use as students have more turns (greater output) than they would get in a whole-class setting. While the quantity of output was greater for the treatment group, it did not in turn lead to greater gains on the SPS-LA posttest when compared to the control group. This suggests that more output alone may not be a key factor in improving grammar. Another proposed advantage, touted by Kagan and related to levels of extraversion, is that cooperative learning can be useful in lowering students' affective filters. Introverted students feel more comfortable when interacting in small groups as compared to when they are asked to speak in front of an entire class. Students, particularly more introverted ones, often times find it easier to talk in small groups with supportive partners and/or teammates. In the current study, it was found that while the more introverted students did not speak out as much in the whole-class setting to the class at large, they did often interact with students seated immediately next to them. This suggests that the type of output, whether in a small group or large group setting, may not have a significant impact on the development of grammar in English. A third advantage given by Kagan is that peer support encourages students to contribute to one another's language development. The present study seems to indicate that levels of peer support are not dependent on how students are grouped. Peer support can occur in whole-class settings as well as classrooms that have implemented cooperative learning strategies.

Pedagogical implications. The present study may have some utility for ESOL teachers on two fronts. First, when teachers make decisions about how best to group students learning English grammar, they can be confident that whether the students work in cooperative groups or as a whole-class they can be successful as both the treatment groups and control group made gains from the pretest to the posttest. In fact, the two groups made nearly identical progress and therefor the teachers should not feel that one grouping strategy was superior to other when trying to teach English grammar to high school students.

Second, the results of the current study seemed to indicate that students across the extraversion spectrum can be successful in learning English grammar regardless of where they fall on the spectrum and whether they are placed in cooperative groups or work in a whole-class environment. The concern that the more introverted students would not make the same level of gains on the SPS-LA than their more extraverted peers while working in cooperative groups was not realized. Cooperative learning seemed to work equally well for all of the students who took part in the study regardless of whether they indicated that they were more extraverted, more introverted, or ambiverted (Van Edwards, 2016).

Delimitations and Limitations

The present study has numerous delimitations and limitations. Delimitations are boundaries the researcher purposely sets in order control the study which make it difficult to generalize the results, and limitations are identified shortcomings of the study which fall outside the control of the study (Creswell, 2009).

Delimitations. This study has been purposefully delimited to a narrow population which effects the generalizability of the results. The generalizability of the study is delimited to public secondary schools in the Midwest of the United States with students who speak Spanish as a

native language. It may not represent the results that other ESOL populations in different geographical areas or with other first languages. Another delimitation which effects the generalizability of the results is that the participants who took part in the study were in intermediate and advanced level ESOL classes. The study did not look at students in beginning level ESOL classes, and as such, it may not be applicable to such students. The study took place in a relatively large urban high school with students from lower socio-economic backgrounds. More affluent students or students in suburban or rural schools might show different results. Furthermore, the study was conducted during five weeks of the final quarter of the school year with students who were already familiar with one another. The study was therefore delimited to students in a regular semester class near the end of a school year, and not to other situations such as classes in earlier quarters of the school year or classes taking short-term intensive English courses. Finally, the students' grammar achievement was delimited as performance in a written context and not an oral communication context.

Limitations. Prior to conducting this research, limitations that might have possible effects on the interpretation of the results were identified. First, in the present study students' levels of extraversion were measured with a self-report questionnaire. While the questionnaire had been used with other groups of teenagers, it is still possible that it was not a completely accurate measure and the students' responses may not have given a true reflection of their levels of extraversion.

Second, quantitative data were collected twice during the study once on the pretest and once again on the posttest. Having just two data points does not allow for pattern analysis and this is a limitation. If the study encompassed more time it might be possible to differentiate

treatment effects over an extended period of time which would allow for a clearer interpretation of the effect of the intervention.

Suggestions for Future Research

The following suggestions for future research are the result of the present study. As the pretest to posttest gains were not found to be significant and the treatment lasted only five weeks, a longitudinal study of several months or a full school year might be warranted to examine the longer-term effects of cooperative learning on the grammar development of students across the extraversion spectrum. It is worth exploring to see if longer implementation of cooperative learning which would allow for more practice time in the various groups would help students across the extraversion spectrum succeed in learning more grammar or if it would favor students at either end of the spectrum.

Regarding the independent variables, the current study chose to investigate the differential effects of cooperative learning and whole-class instruction. Other grouping options might be considered in future studies for instance including classes which mixed the two grouping methods with practice exercises being done in both whole-class groups and cooperative groups. Along these same lines and at the suggestion of the more introverted students, it might also be worthwhile to include independent learning as a variable and investigate the effects of working in groups versus working independently outside of a group.

While this study looked at the dependent variable of extraversion as measured by the JrEPQR-s, it did not take in-depth consideration of differences in student behavior while working in the groups. One suggestion would be to study what specific group processing behaviors the students demonstrate such as asking for help, giving help, building consensus, and giving and receiving correction. Veenman, Denessen, Van Den Akker, and Van Der Rijt (2005) examined

four categories of behavior in a mathematics course: instrumental (e.g. requesting an explanation of a process), executive (e.g. asking for a direct answer), confirmatory (e.g. verifying a proposed suggestion), and affective (e.g. giving positive comments). An observation protocol and questionnaire based on Veenman et al. might be adapted to an ESOL context and help researchers establish which behaviors have the greatest positive influence on language development.

Conclusion

While the importance of learning English and improving one's English literacy skill differs amongst people, for ELLs who attend schools in the United States the stronger their English skills become the more opportunities they will have in their lives. To help with this human resource development, ESOL classes are widely taught across the country. ESOL teachers utilize a variety of instructional strategies in order to help their students succeed. One such strategy that is thought to be beneficial is cooperative learning. It is thought by helping ELLs increase the amount of output they produce there will also be an increase in the amount of corrective input they receive in a target language.

The present study was attempted in order to contribute to the collective body of knowledge on cooperative learning by examining the influence of the personality trait of extraversion on grammar development while working in cooperative learning groups. To date there have been very few studies that have focused on the use of cooperative learning strategies with high school ESOL students, and even fewer that have examined how the personality trait of extraversion influences ELLs language development while students work cooperatively. The findings of the current study can be summarized as follows:

1. The findings show that there were no statistical significant differences in achievement gains on the Scantron Performance Series Language Arts Assessment Parts-Of-Speech section (SPS-LA) between classes in which small group, cooperative learning instruction was used and those that utilized whole-class instruction.
2. The study also found that students across the extraversion spectrum showed similar gains on the SPS-LA and no advantage was found for either the students who were the most extraverted or those that were the most introverted.

While neither of these findings was found to be significant, the present study does contribute to the existing literature and may be useful to ESOL teachers as they implement cooperative learning structures and activities into their classes.

The present study was not able confirm the hypotheses on which it was based to be accurate nor to answer the research questions asked by the study in a statistically significant manner. The results of the research also have left many questions unanswered and many more questions to be asked. Implications for theory and practice have been presented and proposals for future research discussed. It is hoped that secondary ESOL teachers may use this study's results to inform their instructional practices. It is also hoped that researchers can use these finding to inform their research and extend the present findings into further research.

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Appendix A

Junior Revised Eysenck Personality Questionnaire: Short Form

(Roy, 2012, p. 117)

Extraversion Questions.

1. Can you get a party going?
2. Are you rather lively?
3. Do other people think of you as being very lively?
4. Would you rather sit and watch than take part in parties?
5. Do you like to talk a lot?
6. Would you call yourself happy-go-lucky?
7. Do you like going out a lot?
8. Have you got a lot of friends?
9. Do you find it hard to really enjoy yourself at a lively party?
10. Would you rather be alone instead of being with other young people?
11. Do you like mixing with other young people?
12. Can you get yourself to go and enjoy yourself at a lively party?

Appendix B

Scantron Performance Language Arts Assessment Content

Adverbs - E

Adverbs modify verbs, adjectives, or other adverbs by answering the questions how, when, where, how much, or to what extent.

Adverb Types

1) Adverb modifying a verb

The bird flew QUICKLY across the field.

(The adverb "quickly" describes the verb "flew")

2) Adverb modifying an adjective

My little brother is AMAZINGLY intelligent.

(The adverb "amazingly" describes the adjective "intelligent")

3) Adverb modifying another adverb

The lost kitten was found VERY quickly.

(The adverb "very" describes the adverb "quickly")

A positive adverb is used to describe one thing. A comparative adverb is used when comparing two things. A superlative adverb is used when comparing more than two things.

1) Positive - fast / cautiously 2) Comparative - faster / more cautiously 3) Superlative - fastest / most cautiously

A few adverbs, however, are compared irregularly. These include:

Positive Adverbs

well, badly, far, little, much

Comparative Adverbs

better, worse, less, more

Superlative Adverbs

best, worst, least, most

Subordinate Clause/Conjunction

A subordinate clause cannot stand alone as a sentence and does not express a complete thought.

Example:

I slammed the phone down on the receiver because I was angry.

"Because I was angry," is a subordinate clause. It cannot stand alone as a sentence.

Consonants - C

Spelling is based on the vocabulary commonly used in this grade level.

Some consonants can make more than one sound.

For instance, the letters s, g, and c can make a soft or hard sound.

The words space, gentle, and city have soft consonant sounds, while the words busy, gone, and cabin have hard consonant sounds.

Some words contain silent consonants (such as lamb), while others have double consonants (like worry).

In such cases, when words can't be spelled phonetically, students will simply have to practice spelling the words.

Vowels: Long/Short - C

Spelling is based on the vocabulary commonly used in this grade level.

A common pattern for words with long vowel long sounds is vowel, consonant, vowel. For example, words that end with the letter e.

Examples include the words: "stove", "came", and "hive".

Another common pattern for long vowel sounds are words with two vowels in a row.

Examples include the words: beam, pain, and sem.

A common pattern for short vowel sounds is a consonant followed by a vowel.

Examples include the words "kept", "win", and "brim".

Proofreading (Spelling) - C

Proofreading should be done to identify spelling, grammatical, punctuation, and capitalization errors.

Spelling - F

Spelling is based on the vocabulary commonly used in this grade level.

An example of a word list that could be used for this exercise includes the following words:

tenacious
harmonious
unconscious
ferocious
infectious
conscientious
glorious
spacious
precarious
furious

Pronouns - B

A pronoun is a word that is used in place of a noun.

1. Donna went for a walk.
2. She went for a walk.

In the second sentence, she is a pronoun that takes the place of the noun Donna.

The most commonly known pronouns are personal pronouns such as I, me, we, us, he, she, it, *him, her, they, and them.*

Often pronouns are used to replace nouns to keep sentences from becoming dull and repetitious.

Example: *Rita likes birds. Rita likes to photograph birds. -> Rita likes birds. **She** likes to photograph **them**.* The pronoun **she** replaces the proper noun Rita, and **them** replaces the noun birds.

Modifiers - D

Modifiers give additional information about nouns, pronouns, and verbs. Modifiers are adjectives, adverbs, and phrases that help to describe what has been seen and heard.

The underlined words in the following sentences are modifiers:

"I enjoy eating broiled fish," and "The boy played the drums loudly."

Subject-Verb Agreement - F

When the subject (the person place or thing in a sentence) matches the verb (the action of a sentence) in number, the subject and verb are in agreement. If the subject is singular, then the verb must also be singular. Likewise, if the subject is plural, then the verb must also be plural.

Example: "He wants to go."

The subject (he) is singular. The verb (wants) is singular.

Example: "They want to go."

The subject (they) is plural. The verb (want) is plural.

Here is a sentence in which the subject and verb don't agree:

"We loves to run on the beach."

It is incorrect because the subject (we) is plural, but the verb is singular (loves).

Verb Tense - A

A verb expresses an action that may or may not be visible. In "Samantha pushed the bike," "pushed" is a visible action verb. "Pushing" is something that can be observed. In "Samantha needed a new bike," "needed" is the verb, but it expresses an invisible action.

Verb tense demonstrates the time of the action indicated in a sentence. Verb tense indicates that

an action has happened (past tense), is happening (present tense), or will happen (future tense). For example, "run" is present tense, past tense is "ran," and future tense is "will run."

Adjectives - C

Adjectives modify nouns or pronouns by answering questions such as how many, what kind, or which one. In the sentence "We have lived in five states," the word "five" describes the word "states." Five is the adjective describing states, the noun.

Adjectives can be used to compare people or things. There are three degrees of comparison: positive, comparative, and superlative.

A positive adjective describes one noun. Examples: strong, careful, happy, generous

A comparative adjective compares two nouns. Examples: stronger, more careful, happier, more generous

A superlative adjective compare more than two nouns. Examples: strongest, most careful, happiest, most generous.

Most one syllable adjectives form their comparative and superlative degrees by adding "er" and "est" to the end of the word.

Some two-syllable adjectives form their comparative and superlative degrees by adding "er" and "est," while others use "more" and "most."

Adjectives of more than two syllables form their comparative and superlative degrees by using "more" and "most" or "less" and "least."

Fragment/Run-On Sentence - F

A sentence must include at least one noun and one verb to express a complete thought.

A sentence fragment is an incomplete sentence that cannot stand alone because it conveys only partial meaning.

Example: A movie about kids.

This group of words contains a subject (*a movie*) but does not contain a verb.

Example: Likes fun music.

This fragment contains a verb but is missing a subject.

A run-on sentence is a sentence that contains too much information without using necessary punctuation or conjunctions.

Example: My dad baked a cake it tasted great without frosting.

This is a run-on sentence because it contains more than one subject, more than one verb, and does not contain necessary punctuation.

Fragments are incomplete sentences that are missing either subjects (nouns) or predicates (verbs). Run-on sentences are long sentences that do not use proper punctuation or conjunctions (*and, but, or*, etc.)

Appendix C

Student Observation Form

EVIDENCE	OBSERVATIONS
On-Task Behavior	Ex: Begins work promptly, Completes work,
5-Excellent (above & beyond) 4-Very Good (Always) 3-Satisfactory (Usually) 2-Marginal (Sometimes) 1-Deficient (Seldom) 0-Not Demonstrated (Never) -1-Unsatisfactory (Off-Task)	
Contribution of Ideas	Ex: Relevant Conversations, Evaluates New Information, Takes turns
5-Excellent (above & beyond) 4-Very Good (Always) 3-Satisfactory (Usually) 2-Marginal (Sometimes) 1-Deficient (Seldom) 0-Not Demonstrated (Never) -1-Unsatisfactory (Negative Ideas)	
Assisting Classmates	Ex: Teaches others, Reviews other's work, Explains work/assignment
5-Excellent (above & beyond) 4-Very Good (Always) 3-Satisfactory (Usually) 2-Marginal (Sometimes) 1-Deficient (Seldom) 0-Not Demonstrated (Never) -1-Unsatisfactory (Off-Task)	
Ask for Help/Clarification	Ex: Plan works, Understands Directions
5-Excellent (above & beyond) 4-Very Good (Always) 3-Satisfactory (Usually) 2-Marginal (Sometimes) 1-Deficient (Seldom) 0-Not Demonstrated (Never) -1-Unsatisfactory (Off-Task)	

Other Comments:

Appendix D

Pre-Treatment Interview Protocol

Teacher/researcher's script:

*Thank you for completing this interview. It will take about 20 to 30 minutes and will include 7 questions regarding your learning experiences in my English class. I would like your permission to record your interview, so I may accurately document the information you convey. If at any time during the interview you wish to discontinue the use of the recorder or the interview itself, please feel free to let me know. All of your responses are **confidential**. They will not affect your grade in this class in any manner. Your responses will remain confidential and will be used to develop a better understanding of how you and your classmates feel about the classroom activities that are used in my class. The purpose of this study is to increase my understanding of ESOL students and how I can help you and other students learn more in my classes. You may also withdraw your participation at any time without consequence. Do you have any questions or concerns before we begin? We will now begin the interview.*

1. What do you think is the best way to learn English grammar? Why?
2. In general, do you like when your teachers put you in small groups to do your classwork? Why and Why not?
3. In general, do you like when teachers put you in one large group to do your classwork? Why and Why not?
4. In general, do you like when teachers let your work by yourself on your classwork? Why and Why not?
5. In our ESL class, do you think working with the whole-class is a good way to learn? Why and why not?
6. In our ESL class, do you think working in small groups is a good way to learn? Why and Why not?
7. Is there anything else you would like to share about learning English?

Notes:

Appendix E

Post-Treatment Interview Protocol

Teacher/Researcher's Script:

*Thank you for completing this interview. It will take about 10 minutes and will include 12 questions regarding your learning experiences in my English class. I would like your permission to record your interview, so I may accurately document the information you convey. If at any time during the interview you wish to discontinue the use of the recorder or the interview itself, please feel free to let me know. All of your responses are **confidential**. They will not affect your grade in this class in any manner. Your responses will remain confidential and will be used to develop a better understanding of how you and your classmates feel about the classroom activities that are used in my class. The purpose of this study is to increase my understanding of ESOL students and how I can help you and other students learn more in my classes. You may also withdraw your participation at any time without consequence. Do you have any questions or concerns before we begin? We will now begin the interview.*

1. Did you like the style of learning we used in to learn grammar? Why and Why not?
2. In general, how did your group do?
3. Did you like working in your group? Why and Why not?
4. In general, did you feel like if you had a question or problem you could get help from your group? Why and Why not?
5. Did you ask for help or did you offer any help to your group? If so, what was it about?
6. Did you feel like you had to lead the group? Why and Why not?
7. Do you feel that everyone in your group did an equal amount of work in the group? Was it fair?
8. Do you feel that your group had a good attitude about what they were doing in class?
9. Did your group communicate well with each other?
10. Were there any activities that you liked more than others?
11. Would you recommend that the teacher use this style of teaching grammar again next year?
12. Is there anything else you would like to share about learning English?

NOTES:

Appendix F

Lesson and Practice Activities

Lessons and Practice Activities

Lesson	Part of Speech	CL Strategy/	Whole Group Strategy
1	VERBS: Present Tense	Fan-N-Pick/ Turn taking	Notetaking/Discussion
2	VERBS: Present Progressive Tense	RoundTable Consensus/ Coming to consensus	Notetaking/Class Game
3	VERBS: Present Perfect Tense	Numbered Heads Together/ Criticizing an idea, not a person	Notetaking/Discussion
4	PREPOSITIONS: Phrases	Inside-Outside Circles/ Encouraging others	Notetaking/Class Game
5	VERBS: Past Tense	Showdown/ Giving Reasons	Notetaking/Discussion
6	VERB: Irregular Verbs	Quiz-Quiz-Trade/ Offering Help	Notetaking/Class Game
7	VERBS: Past Progressive Tense	Think-Pair-Share/ Sharing	Notetaking/Discussion
8	VERBS: Past Perfect Tense	Paired Heads Together/ Coaching	Notetaking/Class Game
9	VERBS: Future Tense	Stand Up-Hand Up-Pair Up/ Disagreeing appropriately	Notetaking/Discussion
10	VERBS: Future Perfect Tense	Odd One Out/ Cooperating	Notetaking/Class Game
11	VERBS: Helping Verbs	Fan-N-Pick/ Checking for Understanding	Notetaking/Discussion
12	CONJUNCTIONS: Coordinating	Showdown/ Agreeing	Notetaking/Class Game
13	NOUNS: Possessive	RoundTable Consensus/ Coaching	Notetaking/Discussion
14	ADJECTIVES&PRONOUNS: Possessive	Think-Pair-Share/ Sharing	Notetaking/Class Game
15	PRONOUNS: Subject & Object	Stand Up-Hand Up-Pair Up/ Introducing Oneself	Notetaking/Discussion
16	PRONOUNS: Relative	Numbered Heads Together/ Accepting a Decision	Notetaking/Class Game
17	PRONOUNS: Indefinite	Mix-Freeze-Share/ Cooperating	Notetaking/Discussion
18	ADVERBS: Common	Quiz-Quiz-Trade/ Offering Help	Notetaking/Class Game

9	ADJECTIVES: Order	Paired Heads Together/ Giving Reasons	Notetaking/Discussion
0	ADVERBS/ADJECTIVES: Superlatives &Comparatives	All Write Round Robin/ Redirecting a Discussion	Notetaking/Class Game

Appendix G

Cooperative Learning Lesson Plan Form

Class: _____ Hour: _____ Date: _____

Step 1: Objective(s)

Content: _____

Language: _____

Group Processing: _____

Step 2: Decisions

Group Size: _____

Group Assignments: _____

Room Arrangement: _____

Materials: _____

Roles to Assign: _____

Step 3: Procedures

Positive Interdependence: _____

Individual Accountability: _____

Criteria for Success: _____

Behaviors Expected: _____

Step 4: Evaluation and Feedback for Students

Evidence of expected behavior: _____

Observations: _____

Feedback: _____

Step 5: Evaluation of Outcomes of Lesson

Task achievement: _____

Group Functioning: _____

Individual Outcomes: _____

Suggestions/Revisions _____

Appendix H

Cooperative Learning Lesson Plan

Cooperative Learning Lesson Plan	
Teacher: <u>Mr. L</u> Class: <u>ESOL 3</u> Lesson #: <u>01</u>	
Lesson	VERB: Present Tense
Standard(s)	<p>ELP Standard 10: Make accurate use of standard English to communicate in grade-appropriate speech and writing.</p> <p>L.6.1/L.7.1/L.8.1 The learner will determine the correct use of a present tense verb in a sentence.</p>
Objectives	<p>Academic: The students will be able to identify and construct grammatically correct forms of present tense verbs used in a sentence or question.</p> <p>Social: Turn-Taking</p>
Essential Questions	How do I correctly use present tense verbs?
Instructional Materials/Resources	<p>Source(s): <u>Present Tense Video</u></p> <p><u>Present Tense Flash Cards</u></p> <p>Assessment: LessonPlan#1:Present Tense Verb http://www.quia.com/quiz/6202606.html</p> <p>Structure:: Fan-N-Pick <u> </u>X<u> </u>1 Copy Per Group <u> </u>1 Copy Per Person</p>
Procedures	<ol style="list-style-type: none"> 1. Write out 12 questions about present tense, write each one on its own card and make a set for each group. 2. Split students into teams of 2-3 students. 3. Assign each student a letter that corresponds with a role: (A) Asking the question [and a follow-up question], (B) Answering the question, (C) Recording the answer. 4. Student A fans out the question cards, upside-down, like you would at the beginning of a magic trick ("Pick a card, any card!"), and holds them out to Student B. 5. Student B chooses a question and hands it to Student A, who reads it aloud, then hands the card back to Student B. 6. Student B ponders his or her answer for 20 seconds, and then he or she responds. [Optional: Student A asks a follow-up question (for another detail, clarification, etc.)].

	<p>7. Student C records Student B's original and elaborated response in a complete sentence. (If there are only two students in the group, combine the Asking and Recording roles.)</p> <p>8. Roles switch by rotating them one person to the left, and a new question is tackled.</p> <p>9. Give the students enough time for everyone to answer at least twice before stopping the activity. Then, if you want, you can have students write out answers to two or three of the questions that were left over.</p>
Roles	<p><input checked="" type="checkbox"/> Questioner</p> <p><input checked="" type="checkbox"/> Answerer/</p> <p><input checked="" type="checkbox"/> (optional)Recorder/Scribe</p>
Task(s)/Cooperative Structure	<p>(a) explain the academic assignment to students,</p> <p>(b) explain the criteria for success,</p> <p>(c) structure positive interdependence,</p> <p>(d) explain the individual accountability, and</p> <p>(e) explain the behaviors you expect to see during the lesson.</p>
Positive Interdependence	<p><input type="checkbox"/> Mutual goals (maximize own and each other's productivity),</p> <p><input type="checkbox"/> Joint rewards (if all group members achieve above the criteria, each will receive bonus points),</p> <p><input checked="" type="checkbox"/> Shared resources (members have different expertise),</p>
Individual Accountability	<p><input checked="" type="checkbox"/> Oral questioning of group members picked at random,</p> <p><input checked="" type="checkbox"/> Individual tests</p> <p><input type="checkbox"/> Checker for Understanding/Praiser.</p>
Criteria for Success	Each student should answer 4 of 6 questions correctly.
Specific Behaviors Expected:	<p>forming (staying engaged with the group, using quiet voices),</p> <p>functioning (contributing, encouraging others to participate),</p> <p>formulating (summarizing, elaborating),</p> <p>fermenting (criticizing ideas, asking for justification).</p>
Monitoring & Intervening	<p>Task work assistance (clarify, reteach) if students do not understand the assignment.</p> <p>Teamwork assistance if students are having difficulties in working together productively.</p>
Formative Assessment	<p>Choose the word that best completes the sentence.</p> <p>_____ the patient on the bed.</p> <p>A. Lie</p> <p>B. Lays</p> <p>C. Lay</p> <p>D. Lies</p> <p>Choose the word or phrase that best completes the sentence.</p>

	<p>A baby _____ the softest skin.</p> <p>A. has B. have C. had D. will had</p> <p>Choose the word that <u>best</u> completes the sentence.</p> <p>Reggie _____ Melinda and Jennifer fall down in the mud.</p> <p>A. sawed B. sees C. seen D. see</p> <p>Which sentence uses a <u>present</u> tense of the verb <i>to mix</i>?</p> <p>A. The scientist mixed all the chemicals before leaving the laboratory. B. The scientist will mix all the chemicals before leaving the laboratory. C. The scientist mixes all the chemicals before leaving the laboratory. D. The scientist had mixed all the chemicals before leaving the laboratory.</p>
Evaluate Outcomes	Teamwork Report

Appendix I

Whole-Class Lesson Plan

Teacher: <u>Mr. L</u> Class: <u>ESOL 3</u> Lesson #: <u>01</u>	
Lesson	VERB: Present Tense
Standard(s)	ELP Standard 10: Make accurate use of standard English to communicate in grade-appropriate speech and writing. L.6.1/L.7.1/L.8.1 The learner will determine the correct use of a present tense verb in a sentence.
Objectives	The students will be able to identify and construct grammatically correct forms of present tense verbs used in a sentence or question.
Essential Questions	How do I correctly use present tense verbs?
Instructional Materials/Resources	Presentation https://www.youtube.com/watch?v=m28BKjBDafU Handout: Present Tense Worksheet Assessment: LessonPlan#1:Present Tense Verb http://www.quia.com/quiz/6202606.html
Review/Presentation	Ss will take Cornell notes while watching the instructional video
Controlled Practice	With the teachers help, students will complete the grid at the end of the video presentation in their notes.
Guided Practice	Ss will complete a second portion of the grid individually. Teacher will go through answers once the majority of the students have completed the grid.
Free Practice	Students will create three positive and negative sentences and three questions.
Monitoring & Intervening	Task work assistance (clarify, reteach) if students have difficulties creating the various sentences as part of the assignment.
Formative Assessment	LessonPlan#1:Present Tense Verb http://www.quia.com/quiz/6202606.html

	<p>Choose the word that best completes the sentence.</p> <p>_____ the patient on the bed.</p> <p>A. Lie B. Lays C. Lay D. Lies</p> <p>Choose the word or phrase that best completes the sentence.</p> <p>A baby _____ the softest skin.</p> <p>A. has B. have C. had D. will had</p> <p>Choose the word that <u>best</u> completes the sentence.</p> <p>Reggie _____ Melinda and Jennifer fall down in the mud.</p> <p>A. sawed B. sees C. seen D. see</p> <p>Which sentence uses a <u>present</u> tense of the verb <i>to mix</i>?</p> <p>A. The scientist mixed all the chemicals before leaving the laboratory. B. The scientist will mix all the chemicals before leaving the laboratory. C. The scientist mixes all the chemicals before leaving the laboratory. D. The scientist had mixed all the chemicals before leaving the laboratory.</p>
<p>Evaluate Outcomes</p>	<p><u>Classwork Report</u></p>

Appendix J

Coaches' Observation Notes

APRIL 5

Cooperative Learning 7 Keys Observation

Name: MR. LAUBENGAYER Grade: MULTI Subject: ESOL
 LESSON: PREPOSITIONAL PHRASE

Positive:

① REDIRECTS/RETEACHES THROUGHOUT STRUCTURE

Content match

① MODELS STRUCTURE AND expectations

Coaching Tip:
 STRUCTURE peer coaching USING T⁴ (tip, tip, teach, try again)

Next Steps:

Comments:
 STRUCTURES OBSERVED: INSIDE OUTSIDE CIRCLE

7 Keys	
<u>Teams:</u> <input checked="" type="checkbox"/> 4 people <input type="checkbox"/> Gender balance <input type="checkbox"/> Ethnic balance	<u>Structures:</u> <input checked="" type="checkbox"/> Content match <input type="checkbox"/> Easy content (first time) <input checked="" type="checkbox"/> Students know steps
<u>Management:</u> <input type="checkbox"/> Quiet signal <input checked="" type="checkbox"/> Room arrangement <input checked="" type="checkbox"/> Clear directions <input type="checkbox"/> Teacher movement L MISS OPPORTUNITY FOR FORMATIVE ASSESSMENT WHEN ① PLAYS	<u>Social Skills:</u> <input checked="" type="checkbox"/> Taught <input checked="" type="checkbox"/> Reminded <input type="checkbox"/> Students use various vocabulary
<u>Teambuilding:</u> <input type="checkbox"/> Fun <input type="checkbox"/> Non-Academic <input type="checkbox"/> Easy for all <input type="checkbox"/> ☺ Feeling the tone	<u>Classbuilding:</u> <input checked="" type="checkbox"/> Up <input checked="" type="checkbox"/> Moving <input checked="" type="checkbox"/> Working with others <input checked="" type="checkbox"/> Positive greetings <input checked="" type="checkbox"/> Work with all
<u>PIES:</u> <input checked="" type="checkbox"/> Positive Interdependence <i>Does one doing well benefit others?</i> <i>Does task completion depend on everyone?</i> <input checked="" type="checkbox"/> Individual Accountability <i>Must everyone perform in front of someone?</i> <input type="checkbox"/> Equal Participation <i>Is participation approximately equal?</i> <input checked="" type="checkbox"/> Simultaneous Interaction <i>What percent of students are engaged at any one time?</i> 50-100% <div style="position: absolute; right: 0; top: 0;"> SOME ⑤s DIDN'T get a TURN w/ ① CONTROL OF TIME </div>	

APRIL 17, 2017

Cooperative Learning 7 Keys Observation

Name: MR. LAUBENGAYER Grade: MULTI Subject: ESOL

Topic: COORDINATING CONJUNCTIONS

Positive:

⑤ HAVE NOTES TO HELP W/
CONTENT DURING STRUCTURE

① MODELS WHOLE GROUP

SIGNAL = BOARD TURNED OVER

LEADER STANDS UP

↳ MOVEMENT

Coaching Tip:

Next Steps:

HOW ELSE COULD YOU
MODEL THE STRUCTURE?
FISHBOWL W/ ONE
TEAM?

Comments:

STRUCTURES -
SHOWDOWN

Strategies -

CORNELL NOTES

KHAN ACADEMY VIDEO

7 Keys

Teams:

- ☒ 4 people
- ☒ Gender balance
- ☐ Ethnic balance

Management:

- ☐ Quiet signal
- ☒ Room arrangement
- ☒ Clear directions
- ☒ Teacher movement

Teambuilding: N/A

- ☐ Fun
- ☐ Non-Academic
- ☐ Easy for all
- ☐ ☺ Feeling the tone

Structures:

- ☒ Content match
- ☐ Easy content (first time)
- ☒ Students know steps

Social Skills: HOW SHOULD ⑤s
COACH/LEAD?
CELEBRATE?

- ☐ Taught
- ☐ Reminded
- ☐ Students use various vocabulary

Classbuilding: N/A

- ☐ Up
- ☐ Moving
- ☐ Working with others
- ☐ Positive greetings
- ☐ Work with all

PIES:

- ☒ Positive Interdependence
Does one doing well benefit others?
Does task completion depend on everyone?
- ☒ Individual Accountability
Must everyone perform in front of someone?
- ☒ Equal Participation
Is participation approximately equal?
- ☒ Simultaneous Interaction
What percent of students are engaged at any one time? 25 - 100%.

OBSERVED BY:

STRUCTURE: NUMBERED HEADS TOGETHER

Cooperative Learning 7 Keys Observation

Name: MR. LAUBENGAYER Grade: MULTI Subject: ESOL
 Topic: RELATIVE PRONOUNS

Positive:

CONTENT MATCH - USING
 RELATIVE PRONOUNS TO
 COMBINE SENTENCES
 ⑤ PARTICIPATION AND
 ENGAGEMENT

Coaching Tip:

CHUNKING STEPS/ACTIONS

1. THINK & WORK TIME
2. ALL STAND AT SAME TIME (INDIVIDUAL ACCOUNT.)
3. CONSENSUS, SIT DOWN, ERASE BOARD
4. # RECREATES ANSWER

Next Steps:

CONSIDER HOW TIGHTLY
 VS. LOOSELY HELD STRUCTURES
 COULD AFFECT PIES...

Comments:

⑤ KNOW EXPECTATIONS OF
 COOP. LEARNING AND
 PARTICIPATE

7 Keys

Teams:

- ☒ 4 people
- ☒ Gender balance
- ☐ Ethnic balance

Structures:

- ☒ Content match
- ☐ Easy content (first time)
- ☒ Students know steps

Management:

- ☐ Quiet signal
- ☒ Room arrangement
- ☒ Clear directions
- ☒ Teacher movement

Social Skills:

- ☐ Taught
- ☐ Reminded
- ☒ Students use various vocabulary

Teambuilding: N/A

- ☐ Fun
- ☐ Non-Academic
- ☐ Easy for all
- ☐ ☺ Feeling the tone

Classbuilding: N/A

- ☐ Up
- ☐ Moving
- ☐ Working with others
- ☐ Positive greetings
- ☐ Work with all

PIES:

- ☒ Positive Interdependence
*Does one doing well benefit others?
 Does task completion depend on everyone?*
- ☒ Individual Accountability — SHOWING BOARD
Must everyone perform in front of someone?

- ☒ Equal Participation
Is participation approximately equal?

- ☒ Simultaneous Interaction
What percent of students are engaged at any one time?

1/14 — 100%
 ↳ RANDOM # GENERATOR

HOW WOULD THIS CHANGE
 if ONE ⑤ FROM EACH TEAM
 STANDS & RECREATES?
 (AND SIMULTANEOUS
 INTERACTION)

OBSERVED BY:

Whole Group Lesson

Teacher: Mr. L	Class: ESOL 2 /13 students (2 tardy) Date: 04.17.17
Lesson	Coordinating Conjunctions
Standards	
Objectives	<ul style="list-style-type: none"> • Academic: Coordinating Conjunctions: FANBOYS • Social: Coaching & giving feedback to peers
Essential Questions	How do I use CC correctly? When do I use CC?
Instructional Materials / Resources	<ul style="list-style-type: none"> • Sources: Khan Academy Video • Presentation: Cornell Notes • Exercise: Showdown • Formative Assessment: Online quiz
Presentation	<p>Class took Cornell notes about coordinating conjunctions. Students used the video as a resource. T stopped video periodically to note important parts of the video. T called on individually at first, but then individual students chimed in when they saw something important. T then stopped the video, flipped to the notes, wrote a few notes down, and then returned to the video. T gave S options to make up their own sentence or use the sentence examples from the video in their notes. After the first word, T did not stop video until a S asked so he could catch up. As students caught up, one asked for a story. T responded "no," by using a CC in a sentence.</p> <p>As students finished notes, T asked why some examples had commas and others did not. S answered ones with commas are sentences and the others are not. T pointed out clauses and comma use.</p>
Controlled Practice	Showdown. T reviewed procedure for CL structure. T led a practice round: "I really like ice cream, _____ I don't eat it every day."
Guided Practice	Second round. S w/ longest name had to stand up. The leader stands and read the whiteboard while other group members wrote the answer. T instructed leaders to check answers and then give praise or feedback. T answered a few anticipated questions (ex-yes, you leaders do have to stand up.) T distributed cards to each group and instructed leaders on what they needed to do if no one got the answer right (try the exercise again).

Whole Group Lesson

Free Practice	Groups worked together to complete CL activity. S took turns leading. Leaders read cards aloud to group. Many then followed up by showing their peers the card w/ the answer covered. T assisted a struggling groups to help them get the procedure down. T had to pull 1 student aside to practice on his own due to behavior. S was able to work independently w/ success. T checked on him periodically. 100% of students were engaged in the activity. Every student had opportunities to participate and lead.
Monitoring & Intervening	See text in blue above. S leaders provided feedback and scaffolding (showing text) to assist peers. T also observed and gave feedback to each group.
Formative Assessment	Online quiz
Evaluate Outcomes	

Cooperative Learning Lesson

Observer: [REDACTED]

Teacher: Mr. L	Class: ESOL 2, 13 students	Date: 04.27.17
Lesson	<ul style="list-style-type: none"> Comparative and superlative adverbs and adjectives 	
Standards	<ul style="list-style-type: none"> 	
Objectives	<ul style="list-style-type: none"> Academic: Comparative and superlative adverbs and adjectives Social: 	
Essential Questions	How do I use comparative and superlative adjectives and adverbs correctly?	
Instructional Materials / Resources	<ul style="list-style-type: none"> Sources: Handout(s): Cornell Notes Assessment: Quiz Structure: Notes and group practice 	
Procedures	<ul style="list-style-type: none"> T led students in taking Cornell notes. Posed question "What is comparative? What is superlative?" Prompted students to attempt questions by asking them to refer to bell work from the start of class. T showed a video on comparative and superlatives. T stopped the video periodically to point out examples, what they meant, and how they were comparative and superlative. T stopped video when it answered questions he'd posed in the notes. T reviewed rules for when to add -er and -est. Worked with students to generate examples. 	
Roles	<ul style="list-style-type: none"> T gave students 3 pictures of other students and their profiles. S use whiteboards to create sentences using comparative and superlative comparisons. T had students share sentences with face partners. Upon noticing that groups/students were struggling... T paused class work to have students watch one group's example (that was correct), then guided the rest of the class through another sample before having them return to small group work. 	
Tasks/ Cooperative Structure	A. Explain the academic assignment to S B. Explain the criteria for success	

Cooperative Learning Lesson

	C. Structure positive interdependence D. Explain the individual accountability E. Explain behaviors expected to be seen during the lesson
Positive Interdependence (done by T)	<input checked="" type="checkbox"/> Mutual goals (maximize own and each other's productivity) <input checked="" type="checkbox"/> Joint rewards (if all group members achieve above criteria...) <input checked="" type="checkbox"/> Shared Resources
Individual Accountability (done by T)	<input checked="" type="checkbox"/> Oral questioning of group members picked at random <input checked="" type="checkbox"/> Individual tests--a quiz for students to complete was posted for them to work on after class and during the next class. <input checked="" type="checkbox"/> Checker for Understanding/Praiser
Criteria for Success (given by T)	Yes. Students checked and critiqued each other's work. Teacher provided feedback to a few individuals and groups.
Specific Behaviors Expected (done by S)	<input type="checkbox"/> Some <input type="checkbox"/> Forming (staying engaged with the group, using quiet voices) <input type="checkbox"/> Some <input type="checkbox"/> Functioning (contributing, encouraging others to participate) <input type="checkbox"/> Few <input type="checkbox"/> Formulating (summarizing, elaborating)--more were able to do so with coaching from the teacher. <input type="checkbox"/> Few <input type="checkbox"/> Fermenting (criticizing ideas, asking for justification)--S were able to do so with coaching from the teacher. Some students struggled to be focused on the task and therefore had some difficulties completing the group activities. T redirected as needed.
Monitoring & Intervening (done by T)	<input checked="" type="checkbox"/> Taskwork assistance clarify/reteach if students do not understand the assignment: T paused lesson when he saw students struggling with the group task <input checked="" type="checkbox"/> Teamwork assistance if students are having difficulties in working together productively: Some S were able to support one another.
Formative Assessment	Quiz
Evaluate Outcomes	